The NEW YORK STATE Conservationist

"BURNT MOUNTAIN" *by Winslow Homer, 1892* *Courtesy Charles R. Henschel*

State of New York Conservation Department

August - September, 1948

"Campfire"—*Winslow Homer*

Courtesy Art Institute of Chicago

"A Good Shot—
Adirondacks"
—*Winslow Homer*

Courtesy of Charles R. Henschel

FIVE PAGES OF HOMER

THE editor has many uncles. We wouldn't mention this if it weren't for the fact that one of them used to tag along on some of Winslow Homer's painting expeditions. The uncle, a small boy then, used to carry the easel. Mr. Homer carried the paints and the rest of the paraphernalia, including a jug said to contain tea.

These expeditions used to start out from a small clearing about ten miles from the Town of Minerva, in Essex County. Mr. Homer seldom went far. The lake he painted most frequently —Mink Lake—was nearby, and behind it stood another favorite subject, Beaver Mountain. Having got himself comfortably set up on the shore, Mr. Homer announced the time when he wished to be picked up for the return trip to the clearing and then dispensed with his retinue. Thereafter he could be heard sputtering and fuming, and occasionally thrashing through the brush to the springhole where he'd cached his jug.

Sometimes Mr. Homer went farther afield—about two miles down to the Hudson River. This was good hunting country, and it was down there that he painted the buck (with a flash of gunpowder behind him) on the opposite page. Rufus Wallace, an old guide who is said to be the bearded man in "Campfire," used to keep a couple of good hounds up on the clearing, and many a time they drove a buck down to the watchers along the river. Mr. Homer didn't hunt much himself, but he liked to go along.

Including our covers, we have five pages of Winslow Homer in this issue. We are very grateful to the people and institutions that made this possible by giving us permission to reproduce the paintings, by writing the story, even by doing the layout for the center spread. We are also, of course, profoundly grateful to the artist himself. The article about him makes this point more ably, but it seems to us that his paintings impressively suggest what woods and mountains and lakes can mean to people.

And as it happens, these woods and mountains and lakes are our own Adirondacks. We still have them. They can still mean the same thing.—Editor

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No stamps, please.

VOL. 3, NO. 1 AUGUST-SEPTEMBER 1948

STATE OF NEW YORK
THOMAS E. DEWEY, GOVERNOR
Published Bi-Monthly By the
CONSERVATION DEPARTMENT

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The Conservationist is an official publication of the N. Y. S. Conservation Dep't., published every two months at the Department's offices, Arcade Bldg., Albany, N. Y. No advertising accepted. Subscription rates $1.00 per year. Entered as Second Class matter July 24, 1946 at the Post Office at Albany, N. Y., under Act of March 3, 1879.

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CONSERVATION EDUCATION

This discussion, to be continued in the next issue, begins with a statement of the objectives and convictions which this magazine—as an instrument for Conservation Education—is now attempting to promote

THIS magazine is published by the Division of Conservation Education, a relatively new and small unit within the Department. The Division has other means of reaching the public but right now the magazine, although its circulation is far from what we think it should be, is the most effective tool we have at hand. We concentrate our efforts on it. Therefore this discussion of Conservation Education begins with a statement of the convictions and objectives of our Division, as reflected in the editorial policy of our magazine.

First, our objective. Essentially, it is to promote a better and more general understanding of Conservation. In assuming that a *better* understanding is required we infer two things: (1) that there are certain misguided theories concerning Conservation that need correction; and (2), that there are a great many established facts concerning it that need far wider circulation than they now have. In attempting to promote a more *general* understanding we aim simply at interesting, *and involving,* more people in Conservation than have heretofore considered it a matter of concern to them. Tying these two threads together, our objective appears as simple as our original statement of it—to promote a better and more general understanding of Conservation, so that more will be accomplished in that field.

This objective is based upon two convictions: (1) that Conservation has now become a matter of importance to everybody, and (2) that if we can convince everybody of this, then the battle is won. Obviously, the success or failure of all efforts at Conservation Education, even the validity of the efforts themselves, depends upon the degree of importance that can be genuinely and properly attributed to Conservation.

This question of the relative importance of Conservation is so vital, and the progress of Conservation Education so dependent upon its solution, that we will devote the rest of our space to it. In doing so, we will state by inference the principles on which this magazine is based.

In judging the importance of Conservation, sober and broadminded thinking is called for. Conservation is both a cause and a practical science, and as such it will not be benefitted by blind adherence, to the exclusion of other causes and sciences; or by alarmist shouting or over-statement of any kind. The importance of most things is relative and conditional, and Conservation is no exception; for our own part, let us say that there are times and specific situations in which it should be put aside in favor of greater human interests.

We feel, though, that Conservation has genuine importance from two distinct points of view, one fairly well recognized, the other virtually unexplored. Its immediately practical importance is obvious. There is no question but that our natural resources have been heavily taxed, even squandered, and require positive action to safeguard what we have left and to restore some of what we've lost. This fact alone should be sufficient to establish Conservation on an important plane.

But there is also another point of view in measuring the importance of Conservation. It involves evaluating the things that Conservation is supposed to care for, the lands and forests, the animals and birds, and the rest. Obviously these things have more than a material value. Winslow Homer is only one of many who have felt this; there are millions of citizens, akin to Homer in feeling if less articulate in expression, who derive from the natural world the same manna for the spirit.

These people belong on the side of Conservation. In Homer's day it was possible to take for granted the natural world that he loved. That is no longer possible; although the wilderness that Homer painted is still as wild as ever, it is a wilderness maintained and protected by Conservation and Conservation Law. Those that love it as Homer did must become identified with Conservation.

Everything considered, it seems to us that Conservation Education operates in a fertile field. As a science, Conservation is a practical necessity; as a science *and* a cause, it has an importance and a diversity of appeal that should attract feeling, thinking people in any trade and any walk of life. Our first job is to see that it does.

—P. W. FOSBURGH

WEST POINT IN THE FOREGROUND; ACROSS THE RIVER IS THE VILLAGE OF COLD SPRING

The River

The Tidewater Hudson, from The Troy Dam to the Atlantic

THERE was a time when it was the vogue in this country to favor Old World associations and culture over the home grown variety. It was the natural thing, perhaps to consider that the value of things American—scenery, music, painting, or houses—would be enhanced if they were related in some way to a comparable item on the Continent having a long established reputation or value. Out of this came the unfortunate but happily short-lived tendency to refer to the Hudson River as "The Rhine of America". Of the things which have since emerged from this inclination to provide them with a patina of the Old World and are now recognized as being distinctive by their own merits, the Hudson is a striking example. For in the Hudson we have a river which in its usefulness, its myths and legends, its history, and its sheer beauty, is unsurpassed if not unparalleled by any other river in the world.

After sowing its wild oats in the Adirondacks, the Hudson enters maturity and full river-hood at the beginning of tidewater at Troy. From here to the sea The River actually flows in a fiord. For a considerable part of its navigable length the river floor is below that of the ocean, and is, in a sense, more an arm of the sea than a river. At West Point, for example, The River reaches its greatest depth of 202 feet. But the story of The River is not so much a matter of its geological origins as it is of an area of our State that people have found to be a fine place to live, prosper, and pursue happiness.

The stitches which sew together the fabric of the Hudson's story are the sailboats and steamboats which have over the years sailed its length. In the settling of the Hudson Valley, The River at once provided a tremendous highway for trade and travel. In the early days, the common carriers were

sailboats of varying types and sizes and it was this age which produced the famous type of boat known as the "Hudson River Sloop". These craft, as broad-beamed as the Dutchmen who sailed them, carried the bulk of the river trade until they, and other sail, finally gave way to Fulton's "Clermont" and its steam progeny.

The last 125 years on The River have been an especially colorful period. The successful trip of the "Clermont" on the Hudson in 1807 introduced the first steamboat and revolutionized river commerce. At first, Robert Fulton, the "Clermont's" inventor, with his father-in-law Chancellor Robert R. Livingston succeeded in obtaining from the State Legislature a monopoly in steamboat operation on The River, and for 20 years they prevented the establishment of any competition. This monopoly was eventually broken, however, and rival steamboat companies developed by leaps and bounds. Naturally competition was heated and every means was used by rival companies to gain an advantageous position in this thriving new enterprise.

In efforts to hold forth attractions designed to capture the passenger trade a variety of devices came into play. Boats employed runners, each declaiming the advantages of travel by his particular boat whether it be rates, speed, safety, comfort, or entertainment. Copper boilers, for example, were looked upon as being safer than iron boilers, and so as not to be left behind in the turn of public favor the boiler on more than one boat miraculously changed from black iron to copper over night. An ingenius owner and a liberal application of copper-colored paint provided the needed safety factor.

As entertainment and a competitive factor, several boats were outfitted with calliopes, and the scenic wonders of The River were supplemented by the resounding echoes of weird and wonderful steam melodies. As so frequently happens, however, man was outdone by his own ingenuity. In the case of the "Armenia", in which the first calliope appeared, the demand on her boilers for steam to supply the calliope was so great the the propulsion of the boat was considerably lessened. The inevitable choice of either propelling the boat or playing tunes for the passengers eventually resulted in the calliope going to the scrap heap. The several other boats having these "steam organs" also removed what had proved to be expensive nuisances and relative quiet returned to the valley.

In this competitive period any addition to the river fleet was very likely to be called upon to demonstrate any claims that may have been made as to her prowess as a "speeder". Races between rival boats were a frequent occurrence and were, for the most part, impromtu affairs.

If a race promised to be a close one, steam gauges were plugged, safety valves tied down, and boiler pressures built up to a point never intended by their designers. The two boats would speed off with walking beams pumping and paddle wheels thrashing, all to the general consternation of their passengers and the dismay of prospective passengers left waiting at announced landings.

The accidents and fatalities which occurred as the result of racing and its attendant recklessness finally caused the passage of the Steamboat Inspection Act in 1852, prohibiting racing as well as providing other regulatory measures. As a consequence, races such as produced the tragedy of the "Henry Clay", when the steamer caught fire and burned off Riverdale with a loss of 60 lives, became a thing of the past.

Steamboating was, and to a degree still is, the external evidence of the pulse that beats in the Hudson Valley. Passenger steamers provided a leisurely, romantic, and entirely pleasant method of travel. Pleasure cruises on The River were an extremely popular recreation and few indeed were the fraternal orders, clubs, churches, and schools of the river communities that did not include on their annual social activities program one or more steamboat excursions. Now, as in the past, countless school children look forward with keen anticipation to a trip with their class or Sunday school group on the "Robert Fulton", the "Hendrick Hudson", the "Alexander Hamilton" or the "Peter Stuyvesant", all of them popular steamers of the Hudson River Day Line. (Their parents as well turn to a river trip from time to time).

Up until the 1920's a number of companies operated freight and passenger steamers on the River. But the automobile and modern highways, trailer trucks, and a deeper river channel permitting ocean vessels to ascend the 150 miles to Albany, finally choked off the once flourishing business that steamboating was. The only link which remains with those glorious days are the white passenger steamers of the Day Line which still travel daily, during the summer seasons, between New York City and Albany. What a strong link this is in the hearts and minds of the valley folk is well expressed in a letter written by a soldier to his parents during World War II. Homesick and thoroughly dispirited, he wrote home from Guadalcanal, "As fed up as I am with this place and the war, it wouldn't be so hard to take if I could just hear a Day Line boat whistle once in awhile."

Of all the river boats, there was one who was the queen of them all—the "Mary Powell". Built in 1861, the "Powell" immediately earned a special place in the affections of her passengers and the people of the valley. She was owned by Captain Absalom Anderson, her skipper for years, and her principal run was between Rondout (now part of Kingston) and New York. Steaming away from Rondout in the morning, she covered the 90 miles to New York in about four and a half hours and arrived at her New York pier before noon. In mid-afternoon she was pointing her proud stem upstream on the return trip. By early evening the waters of the Rondout Creek resounded to her bell and to the voice of Seymour Darling, a negro deckhand who served on her for nearly 35 years, calling the home landing.

The reputation of the "Mary Powell" and the name which she earned as "Queen of the Hudson" was built on her speed and the tradition she established as a "family boat". Captain Anderson was a God-fearing man and maintained standards on his boat compatible with the Christian home life of that day. Over a period of 60 years the "Powell" never surrendered her queenly crown. As a fast boat her supremacy was never successfully disputed nor was her record ever marred by a serious accident. One of her funnels was once carried away by a gale in the Highlands but even then she finished her run on time. She ended her days quietly and with dignity at the Mayflower Dock in the Rondout Creek.

COMMERCIALLY, the Hudson is a never failing contributor. While some of the commodities have changed with the years, she still supports an unending flow of traffic bearing all manner of goods and products. Sand and gravel, cement, brick, agricultural products, and machinery flow from the factories, farms, and quarries of the river valley. A deeper Hudson, which produced the Port of Albany (a port further inland than any other in the northeast), added

> THE HUDSON
>
> being our largest and most important river, is the first to be covered in our magazine. We will have others in future issues.

foreign trade, and ocean freighters now sail The River with their cargoes to and from the ports of the world.

The River itself is the outstanding shad river of the Atlantic Coast and produces from two to five million pounds of these food fish annually. The shad, a migratory fish, ascends The River in the spring to spawn. Its capture by fishermen, which is accomplished by the use of gill nets staked in place in the shallow acreas of the lower Hudson or drifted at the surface over the deeper parts of the River, is under regulation by the Department's Bureau of Inland Fisheries. Shad fishing, carried on from within the shadows of Manhattan's skyscrapers to the upper reaches of The River, gives employment to hundreds of persons during the season, April to June, and provides an annual yield worth on the average $250,000. As food, the shad gives enjoyment to thousands who relish its meat or the delicacy of shad roe.

As a resource the Hudson River shad, once at the point of extinction, has been brought back to a highly productive level and every effort is being made to keep it there. The Department is conducting studies of the reproduction and escapement of shad in order to provide a basis for sound regulation of take.

THERE are other fisheries on The River also important in supplying sport for the individual and food fish for the market. For the angler there are more fish available than is generally realized, as evidenced by the growing interest in striped bass in the lower Hudson. In addition, there are many largemouth bass, although seldom caught, and white perch may be taken nearly anywhere along The River. On the other hand, large poundages of its fish can be taken from the Hudson only by nets. The carp is a good example; although now over-shadowed by striped bass, it formerly ran second only to the shad in money value. Other species marketed include bullheads, eels, perch, herring, sturgeon (the famous "Albany beef" of bygone days, when sturgeon weighing several hundred pounds were frequently netted), suckers, sunfish, pickerel, smelt, and catfish. Market conditions play a large part in determining the yield. In the case of the river herring, for instance, we find a fish (a small relative of the shad) which is one of the most abundant in The River but which markets at too low a price to attract much fishing.

Some of the fishing in the marine district waters of the State is directly related to the Hudson. The pound nets of the salt water areas take many shad, whose presence is largely dependent upon The River as a spawning ground.

Pollution in the Hudson is rather prevalent, as might be expected in an industrialized region and in a river so extensively used for shipping. The effect of pollution from raw sewage has been considerably abated, however, and The River itself, because of its size, fortunately has a large capacity to absorb pollution. This, in turn, is favored by the mixing effect of tidal action. Still, pollution is an ever-present menace calling for continuing controls.

WATERFOWL-WISE, the Hudson Valley is one of the six major duck areas in the State and comprises the lower half of the important Lake Champlain-Hudson River flyway for black and other puddle ducks. The continental duck population is now at a low point and in assuming its share of the big job to be done in improving Atlantic flyway duck hunting, the Department is carrying on an expanded waterfowl program which treats basic needs. (See Commissioner Duryea's article in this issue for details). A part of this program is a waterfowl field investigation to guide management practices and to lead to restoration of marsh areas. Such a survey is currently in progress along the Hudson. In addition, the threat to duck feeding areas on the Hudson presented by the recent infestation of water chestnut is being removed by eradication of this aquatic plant by Department crews.

In historical association, The River is a huge story book of romantic and heroic deeds and events. In the early conflicts to which this country was subjected The River was a bulwark eagerly sought by both sides as the keystone in the strength of both offense and defense. Evidence of the momentous episodes of Revolutionary days are found at Washington's Headquarters at Newburgh, the Senate House and Museum at Kingston, West Point, the battle grounds of Stony Point and Anthony's Nose, and in the hundreds of markers and plaques erected by our historians. Tarrytown, Clermont, Trinity Church in New York, Spuyten Duyvil, Catskill, Albany and a host of other places all lend their names as landmarks of events and traditions with which the Hudson Valley so richly abounds. The legends of the Headless Horseman of Sleepy Hollow, Rip Van Winkle, and the Flying Dutchman are today as much a part of the Hudson Valley as they ever were.

The manors which once thrived all along the east bank with their families of patroons and tenants, eventually doomed by the very system in which they found their success, are a testament to the independence of our forebears and their rebellion against the virtual serfdom of the manor system. Yet the atmosphere of spaciousness and grandeur which surrounded the manors somehow still pervades the big valley.

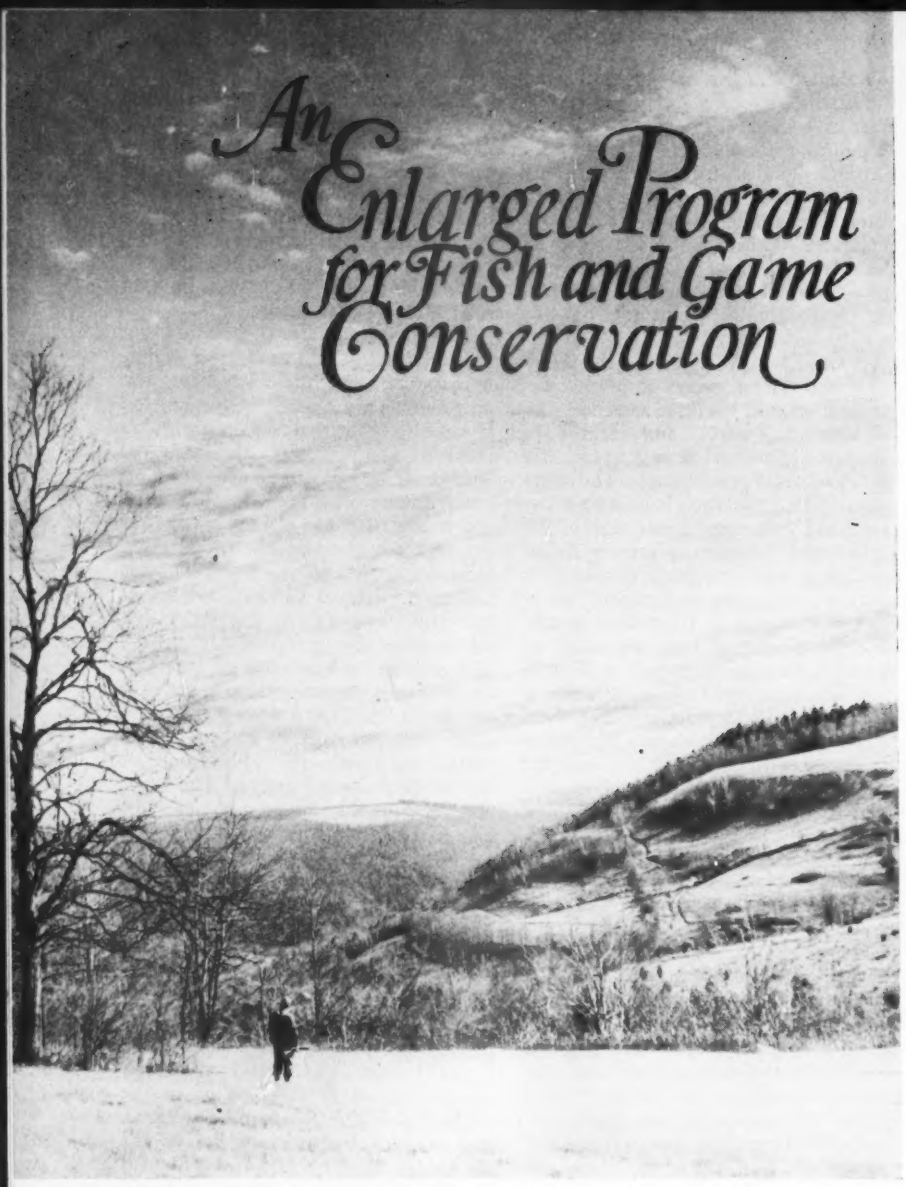
The founding of the City of Hudson is itself a story of early American enterprise. It was once a thriving whaling port, settled by the people of New Bedford and Nantucket who found refuge here in escaping from the torment of British sea power in the early 1800's. Even Captain Kidd brought a dubious distinction to The River when he used it as a base of operations.

Everything considered, it is not surprising that the Hudson River Valley has produced a culture all its own. For an example, we need only turn to the Hudson River School of painting which identifies the first successful group of landscape artists in America. This group came into prominence in 1825 and produced at the start landscapes of the Catskills, the Highlands, and other local scenes. The works of Thomas Cole and Frederick Church are a few of the many examples of the style associated with this group of fine artists. The culture and society produced in the Valley is uniquely its own, yet in it we find a distinct, colorful and vivid cross-section of America and its people.

As one travels the Hudson River Valley the striking beauty of The River and its shores is impressively evident. The rocky Palisades on the Jersey shore; the grandeur of the Highlands with mountains rising to unbroken heights from the very edge of the water (we have here the only point in the Appalachian Mountain chain, from Maine to Georgia, where it is pierced by a navigable river); the broad reaches of The River above the Highlands; the pastoral scenes in the countryside of the upper Hudson; the Catskills; quiet little villages nestled in the bays or on the banks above The River; the mansions, and in some instances, castles of the old estates, many of them now occupied by religious orders or schools but still largely unchanged in outward appearance—in all a scene of infinite variety, apparently impervious to the impact of civilization.

ERAS have come and gone on The River; others will come and go in the future. From the past The River and its valley brings a welter of memories, some sweet, some bitter, and they all combine to produce the sentiment that is so strong in the hearts and minds of the people of this part of the State. From all of these things come the love and reverence which we of the Hudson River Valley hold for The River. For us, no other river, anywhere, can detract from her greatness, and sometimes we wonder what this State, this nation and even the world might have been like if there had never been a Hudson.

—WILLIAM E. TINNEY



An Enlarged Program for Fish and Game Conservation

PART 2
To Improve Hunting

THE first part of this discussion of our expanded fish and game effort in New York, appearing in the last issue of THE CONSERVATIONIST, covered the items for the improvement of fishing. This part principally reviews the program to improve hunting.

Basically, the approach to either problem is the same. In fishing, we need more productive waters, increased stocking, more places to fish and better management of our waters. In hunting, we need habitat improvement so the land will carry more wildlife, effective stocking of game for breeders and for the gun, more places to hunt and a comprehensive appraisal of regional wildlife conditions to promote better local game management.

In addition, to improve both hunting and fishing, we must have better public observance of laws which provide for taking the annual crop and also for preserving a basic breeding stock from year to year.

IMPROVED HABITAT: Wildlife populations fluctuate naturally from time to time as a result of varying conditions, at least one of which, weather, is beyond control of man. However, it is generally recognized that the highest game population cannot exceed the carrying capacity of the land as indicated by available food and cover for all seasons of the year. Thus, if we are to have much more game to hunt in the future, the amount of favorable habitat must be increased. This is the goal we hope to achieve by the following steps:

a. MORE FOOD AND COVER: Because the bulk of the lands on which our people hunt is in private ownership, it is necessary to devise a means of helping landowners to improve conditions for wildlife. The practices we need on these lands—woodland and wildlife area protection, wildlife improvement in odd corners, wildlife borders, farm ponds, tree plantings, windbreak plantings, hedges, marsh management, stream bank and shore erosion control—are a regular part of the already established Soil Conservation program. To speed their adoption, the Conservation Department is now co-operating with this program. Working with the County Soil Conservation Districts, the Department supplies wildlife technical advice and labor, planting stock or other materials, depending upon what is requested, to assist the landowners. We are scheduling $200,000 annually for this important work. Nothing like this ever was done before in New York.

b. SHRUB NURSERY: In managing the State's lands, the Department needs certain shrubs and trees for plantings to supply food for wildlife. It never has had them readily available. To provide a supply for these purposes, the Department has established with Postwar Fund money a special nursery at Painted Post. Its operation involves a yearly expenditure of $10,000.

c. MARSH RESTORATION: Over the years the marsh breeding, feeding and resting grounds for waterfowl have dwindled. These marshes are not only homes for ducks but also for other species, including pheasants and furbearers. Many small marshes will be restored under the Soil Conservation program. Sportsmen are being encouraged to restore or develop others by building impoundments. The State's role is divided in two parts—acquisition and development of major waterfowl areas, and technical guidance in the restoration of small marsh areas. Three undeveloped waterfowl tracts which the State owns—Oak Orchard, Cicero and Naples Swamps— are now being improved. Two additional major areas are in process of acquisition. Others are to be acquired and developed until each major waterfowl region of the State is covered. A special field investigation of waterfowl problems and needs in each region is directing the course

of State acquisitions and guiding local management plans.

PROPER STOCKING. To meet stocking demands in the pheasant shortage, game farm distribution has been increased to 100,000 young and adult birds, 48 per cent above the pre-war levels. In collaboration with the State Conservation Council, we have agreed to peg production at that point. We do so in the belief we have gone as far as we should with propagation and that increased emphasis must now be placed on on improvement of stocking methods, and on improving food and cover conditions. The Game Managers are developing a new stocking policy involving allocation of hens as breeders to the best pheasant range of the State, and equitable distribution of cocks for the gun in first and second class pheasant territory. As a basis for this policy, they are now mapping, county by county, the actual pheasant range in New York. This policy will be discussed fully by the Managers at club meetings during the winter. The game farms are also stepping up their mallard duck production, with an eventual goal of 20,000 ducks annually. The entire game farm program costs $571,000. This compares to $172,000 in 1941-42. More than half of the increase is due to higher costs from inflation which hit the game farms especially hard.

MORE HUNTING AREA: The Department's 3,000,000 acres of public lands present a free hunting opportunity unexcelled in any densely populated region of our country. On our Forest Preserve lands, reforestation and game management areas, you may hunt without charge other than license fee. This opportunity is being increased by the waterfowl tract purchases and additions to the 17 game management areas. Acquisitions in progress add 6,500 acres to the 82,800 acres now in management areas. For this portion of the program, including development of the waterfowl areas, $200,000 is being allocated. It compares to $33,600 in 1941-42 for similar purposes.

BETTER MANAGEMENT: To develop the right pattern for hunting regulations and management work, the Division of Fish and Game must have good appraisals of regional game populations and a thorough understanding of local wildlife problems. Means to solve those problems must be devised and tools for applying the remedies must be provided. These basic principles are incorporated in the expanded program as follows:

a. APPRAISALS OF PROBLEMS: Because the problems must be solved locally, a decentralized organization of wildlife technicians has been established to live with these questions, advise sportsmen co-operators on productive measures to solve them, and also to report game population trends. These are the District Game Managers. Before the war, there were but five of them, covering the entire State. Now there are eight, with one more to be added. For this activity, we have set aside $90,000. This compares to $22,700 in 1941-42.

b. MEANS TO SOLVE THEM: To develop prescriptions for wildlife situations, the Managers need the latest facts from trained researchers. Thus it is necessary for us to have our own investigations of pheasant, grouse, rabbit, deer and waterfowl problems. Present appropriation for this, $148,000, compares to $104,000 in 1941-42, an increase of 24 per cent. It is largely paid from New York's share of Federal excise taxes on arms and ammunition under the Pittman-Robertson program.

c. APPLICATION LOCALLY: In addition to developing regulations and supplying technical guidance to co-operators, the Managers must have a way to apply or demonstrate measures devised by research to correct local conditions. Nuisance wildlife control trappers are such a tool. Their primary job is either to remove nuisance species and predators or to instruct landowners on how to do it, but they also assist the Managers in other types of recommended work. Under the expanded program, 16 full-time trappers are employed for these purposes. In 1941-42 there were none. The cost is $50,000. (In addition 27 part-time trappers are engaged in wildlife control work, through a $75,000 General Fund appropriation, removing foxes in the campaign against rabies). Maintenance of game management areas, water chestnut control, winter feeding, etc., cost $87,000. This makes a total of $137,000 for applying management locally.

The entire cost of this expanded program for hunting is $1,356,000 or 174 per cent more than was allocated before the war. As in fishing, a considerable portion is chargeable to higher costs due to inflation, but no small part is due to the greater effort now being made.

Conservation activities clearly in the category of either fish or game have been set forth separately up to this point. Important to both is another phase of our work. It relates to—

LAW OBSERVANCE: I frequently have called attention to the distressing decline in sportsmanship and increasing fish and game lawlessness which has developed during the postwar period. Such a condition disrupts any planning for better fishing and hunting. It must be abated. New York's program seeks to bring this about in two ways:

a. BETTER ENFORCEMENT: To provide more Game Protectors, the permanent force is being increased by 20 new officers. Permanent and emergency pay increases—advocated by the Conservation Council—have been given. A substantial increase in travel allowance also has been provided, and the men better equipped for effective patrol work. Compared to $501,000 in 1941-42, Law Enforcement now costs $846,000, an increase of 69 per cent.

b. EDUCATION: There would be better observance of fish and game laws if more people had a good understanding of conservation. As I have said before, most of our worst conservation problems today require, first of all, an informed citizenry for their solution. That is why we created a Division of Conservation Education. Its broad purpose is to promote understanding of all phases of conservation. In the field of fish and game, it disseminates information on today's problems and what can be done about them. At the same time, it is co-operating in every way possible to get conservation teaching into our public schools. The Conservation Education Division's program costs $109,000. This is not borne by the Conservation (Fish and Game) Fund; General Fund tax money pays the bill. This expenditure compares to $18,000 in 1941-42, largely for publicity work.

It was for the simple purpose of doing our part to promote public understanding of how we are approaching today's problems that this series of articles on our new fish and game program, which will be concluded in the next issue with a financial report, has been prepared. The approach we follow is a fundamental one. Because so much of it has to be basic, dealing with environment and other limiting factors for our fish and game populations, some of the results may come more slowly than we would like. But they will be lasting.

—PERRY B. DURYEA

PART 3

TO APPEAR IN THE NEXT ISSUE, WILL DISCUSS THE FINANCING OF OUR ENLARGED PROGRAM FOR FISH AND GAME.

A "sport" of yesterday with everything needed for an outing—including Adirondack pack-basket and guide-boats

The Adirondack Pack-basket

IF anything were to be given back to the Indians of this State, credit for the origin of the Adirondack pack-basket should belong to them. It is true that so commonplace an object as a basket has been missed by the recording pens of our historians. But after exhaustive research we have concluded that it was the Abenakis, descendants of what remained of their tribe after the raid by Rogers' Rangers at St. Francis, who originated the Adirondack pack-basket.

Although almost all natives of the region agree with this attribution, it is an Indian who offers the most substantial evidence in support of it. Julius Paul Dennis of Old Forge, Chieftain of the Abenakis, says that it was on his reservation that the basket was designed and made to replace the old Canadian tumpline pack. Chief Dennis, with the modesty characteristic of his peace-loving and industrious tribe, has high praise for the skill of the early whites who also wove the basket, but he says they copied the art from his people.

Like the Adirondack guide-boat (see June-July CONSERVATIONIST), the pack-basket bears testimony to the ingenuity of the region's inhabitants, Indian and white alike. As the boat was the light truck of the waterways, the basket was the general carry-all of the woods. It was at least as early in origin as the boat. Before other means of transportation were developed Mitchell Sabattis, the famous guide, used to carry the mail from Blue Mountain Lake to Long Lake in a pack-basket.

Built to stand heavy loads, moulding itself to the back so it is comfortable regardless of the hard objects carried in it, the pack-basket is superior to other packs particularly when breakable articles are to be conveyed. It is needlessly bulky, however, when only partly filled, and unless its contents are tightly wedged they will tend to shift and throw the pack off balance. Chief Dennis has taken care of this problem by putting a groove in the back, near the bottom, to keep the basket from rolling.

Obtainable in any desired size, a large pack-basket is about 20 inches high in the front, 22 inches in the back, 19 inches in diameter and weighs about four to four and three-quarters pounds. There are even pack-baskets woven in size for children. Best material is ash, with black favored over white (the former sometimes called brown ash by the Indians). A narrow tight weave is indicative of high quality.

Shoulder straps are generally of canvas webbing, the least expensive material and used in preference to leather because perspiration-soaked leather rolls up and is a tasty meal for the numerous porcupines of the north woods.

A wooden handle attached to the rim is desirable and convenient for lifting and hanging on peg or nail but is not always found on a basket. Some prefer the handle on the back side rather than the front so it will not catch in the brush when the pack rides high. Waterproof canvas covering for the top (some baskets are covered all around) takes the place of a ground or shelter cloth for protecting contents from rain.

THE Indians alone seem to know how to select the best trees for the splints. They prefer black ash, which is scarcer than white, because of the tensile strength of the splints. (White ash is likewise more brittle). The log is cut to desired length and rived; that is, a mallet, maul or axe head is used to pound the log, preferably while it is damp or after it has been deliberately soaked. The log is pounded up and down its length and turned in the process, so that the layers of wood growth can be peeled off. (A wheel spoke shaving knife has been used by some old timers for more quickly cutting out splints). Some layers are thinner, some

thicker than others, depending on the year's growth of the tree, and the imperfect splints, or snys, are discarded.

Splints are graded according to thickness. Through the years simple tools have been improved upon, but still in general use today is a vise-like arrangement with a knife, against which the splints are pulled (never pushed) in order to obtain the proper thicknesses. Widths are determined by using gauge-like cutters. One observed has watch spring blades imbedded in a wooden handle.

The Indian takes more pains with his handiwork than the white manufacturer, and the Indian-made pack-basket will be found more tightly woven, the turned-up bottom splints beveled, and the whole finished off more smoothly. The basket is started with wide splints that narrow down toward the top to give the bulge that distinguishes Adirondack pack-basket from other baskets. Some weavers shape their baskets around forms, but in any case splints are kept moist to prevent breaking and are shaved on both sides to eliminate any roughness. A partly completed basket will be allowed to dry before the splints are finally tightened and the basket finished.

The wood-working skill of the Abenakis is of long standing. For generations they have made birchbark canoes as well as an unusual type of bark container, used for preserving fruits, meats and animal blood (for bouillon). Some of these containers are still in existence after a century of use, so indestructible is the bark and so skillful the craftsmanship.

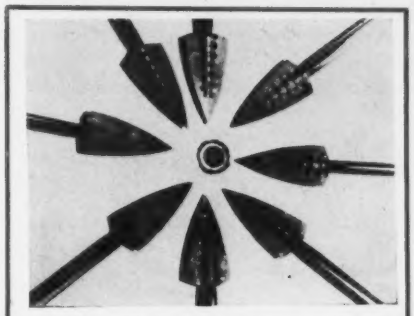
But today it is the older tribesmen who weave pack-baskets; the younger fellows can make more money at other work. The same is true of the present generation of white Adirondackers—they can't be bothered with perpetuating the simple crafts of their forebears. The result is that it's difficult today to obtain a good basket, since the so-called commercial product, lacking the skillful touch of the artisan, is cheaper and has all but forced out of business the few remaining craftsmen.

The pack-basket—the genuine thing—like the Adirondack guide-boat is fast becoming a collector's piece, bowing to the jerry-built article just as the fate of the guide-boat was sealed by the metal and powered craft of today. The demand for both is far greater than the remaining skilled craftsmen can meet.

Yet the woodsman will tell you that when his time comes to cross the River Styx he wants to be ferried in an Adirondack guide-boat and have on his back an Adirondack pack-basket, for the hike down the last trail.

—Roland B. Miller

BIG GAME SEASON FOR ARCHERS



Broadhead Arrows

IN an ancient and long dead age, an unnamed tribal Garand tied a leather thong to the ends of a bent sapling. He then sharpened a stick. With this, the first bow and arrow, he shot the wolf at the door, ate it, and from its hide made an itchy pair of antediluvian BVD's, all of which shows what the bow and arrow did for the guy who lived in 50,000 B.C., the estimated age when archery was born.

Today New York State's archers don't live in caves unless they've made contact with the housing shortage. It is a matter of record, also, that most wolves now are found in and about corner breweries. Despite such radical changes archery as a sport has remained the same in principle; moreover, its amazingly persistent clutch upon modernity has now been recognized generally and officially by New York.

How so? Well, it's this way: Bow and arrow hunting is Big Stuff in many states where archers knock off such animals as peccaries, antelope, deer, bear, cougar, elk or moose. In some cases bowmen have been allowed to go into the woods before riflemen move in—Wisconsin, for instance. In New York a lot of archers wanted a try at a special season other than in Westchester County; now they've got it. For two weeks before the opening of the general season, they may, by purchasing a special archery license ($5.25), have the run of any open county or portion thereof. Frankly, Conservation Department officials feel the deer or bear kill will be negligible—which is no crack at the huntsmen, but is cocking a wise eye at the weapon.

Bowmen must hunt with a weapon weighing at least 45 pounds. "Weight" isn't carrying heft, but pull. The average man can pull 45 pounds and hold it steady at arm's length. A man who does the job with a 70-pound bow could hire out as a carnival strong man. Bullets kill by shock, arrows by hemorrhage; that is, air is let into a vital area and blood flows freely.

TAKING Wisconsin as an example: the season opens there for roughly 10,000 archers about 30 days before the riflemen get busy. The total number of arrow-killed deer in 13 years of legalized hunting has been less than 1,000, yet riflemen bagged an annual average of 35,950! This can happen here, since the ease with which arrows are deflected by branches, twigs, etc., is a phenomenon not lacking in our own woods. The broadhead hunters must move close in for shooting; their advantage is that with no noise except the twang of the bowstring and audible gulps, they often can toss two or three shafts at a deer before the animal becomes sufficiently annoyed to move on to the next clump of grass.

Many New York archers have tried the longbow in Westchester County in past years, where use of rifles or shotguns has been prohibited, and the Art Young Big Game Awards reveal that some have been successful. Last year, George B. Nault, Arthur Stabe and Henry Stabe, all from Pleasantville, brought 'em back dead. So did Fred Todenhagen of Port Chester and Norman Quade of White Plains. Some of the statistics pertaining to these kills are significant: none of the deer traveled more than 250 yards after being hit; the average range was about 25 yards, although Todenhagen's arrow traveled 55 yards and brought down a 200-pound buck; the deer killed were all relatively heavy (in true Westchester tradition), which refutes the claim that arrows kill only lighter animals.

In other states archers claim that bigger and better game, and more sport, can be had by use of the longbow. In our own State, although we won't argue about the sport, we'll wait and see what happens to the game.—Barnett Fowler

The LATTABROOK WOODLOT

the Donaldson woodlot as it might have been —1948—

ABOUT a mile down the road from Homer Donaldson's woodlot, which we described in the last issue of THE CONSERVATIONIST, is another piece of woods of about the same size and on about the same kind of land. The owner is John Lattabrook, who besides being a good farmer is somewhat of an artist at woodworking. For a consideration, he will turn out a reproduction of a Governor Winthrop desk or an antique chair that will stand up right well against the genuine article.

One evening about two years ago, Mr. Lattabrook came over to cry on our shoulder about the shortage of black cherry lumber. "Why, when I was a boy," he said, "there was plenty of it right here in the neighborhood. Would be today if they hadn't kept on skinning the woods the way they did."

"You know," he said, "right after the old man bought the place back in the 50's, he logged the last stick off our lot. Made him so mad, though, when he saw what he'd done, that when he handed the place down in his will he put a string in there that there wasn't to be any more cutting done 'till his oldest boy's grandson—that's my boy, Henry—came of age. Well, Henry was 21 last January so I guess we can go ahead and do some logging any time we feel like it. It's a first-class woodlot now—no slashing or fires or anything for pretty near a hundred years, and we never ran the cows in there any to speak of. I figure to take out some of the bigger stuff next winter if I can, but I want to handle the woods so when it comes my turn to pass the place on to Henry, there'll be something there besides a brushlot." Mr. Lattabrook pulled a long envelope out of his inside pocket.

"Know anything about this business? I got this in the mail the other day. Says something about a District Forester they have over in Cortland. If you ask him, he'll come out and go over the woods with you and even mark the trees that ought to be cut, and figure out the board feet."

"You know," he added with a grim humor, "I always supposed these State fellers spent most of the time warming a swivel-chair or ridin' around in automobiles, but it looks as if these boys really had to get out and sweat a little."

It turned out that John Lattabrook did look up the District Forester, and, sure enough, one morning out by the barn there was a young fellow in his old clothes ready to head for the woods. "I'm the Forester from the District Office," he said. "Let's look around a little and see what we can do for you."

From the pile of odds and ends in the back seat, the Forester drew forth the tools of his trade: a rolled-up steel tape, a big tin-covered notebook that hung over his shoulder on a piece of rawhide, lumber crayon, and what looked like a heavy-duty yardstick covered with figures on both sides. Then there was a shining steel cylinder about 10 inches long that he slipped into the back pocket of his woods coat, and most surprising of all, a spray gun like the ones they use to oil-spray auto springs. John Lattabrook had his own ideas about some of these contraptions but according to his long-standing custom, he decided to let the other fellow do the talking first.

TEN minutes up through the pasture brought them to the edge of the woodlot. A glance into the woods was enough to tell the Forester that here he had something to work with. There was a good stand of merchantable timber with plenty of younger growth, pole-size, saplings, and young seedlings covering the ground. He did a little mental arithmetic and guessed that the saw timber would run about 14 thousand feet to the acre. "Let's see how this one runs," he said, walking up to a good-sized maple, and holding the heavy-duty yardstick ("cruising stick" he called it) across the trunk a little below eye-level. "That's a 22-inch tree," he remarked after some squinting, "and about 2 logs high. Ought not to be more than fifteen per cent cull, so that gives us about 300 board feet."

Next he pulled the steel cylinder from his back pocket and took from it something like a bit with a hole through the middle. Twisting it into the tree, he presently drew out a smooth core of wood about an eighth of an inch through. "See those last 20 rings? This tree isn't growing fast enough to pay its way. The quicker you get it into logs, the better." He took the spray gun, aimed it at the tree and squirted a blob of orange-colored paint on to the bark. "That's the way we mark the trees to be cut, so the logger can't miss 'em."

FURTHER on, the Forester tapped a ten-inch white ash with his cruising stick. "The average logger would take this," he explained, "but it's just beginning to put on wood, and when you cut stuff this size, everybody loses. Better leave her there 'till the next cut and you'll get half again as much volume and twice the grade."

John was getting more interested by the minute. "Young man," he said, after another half hour of sizing up the woods, "I've read over the stuff about what you fellows are doing under this Forest Practice Act, and I've seen what you call the 'standards' for this District—Number 3, isn't it? It looks pretty sensible to me, and if you've got the papers along, I'm willing to sign up right now."

The two men went back to the farmhouse and John Lattabrook signed the simple agreement by which he became a co-operator with the Conservation Department. On his part he agreed to have his woods managed according to the standards which his District Board (composed of other woodland owners in his own and the adjoining counties) had set up: no grazing by cattle, no cutting of young trees, no clear-cutting. The Forester, for the Conservation Department, agreed to furnish a plan of management, which would include: marking of the merchantable timber, help in marketing the products from the woods, and advice on thinning young stands, and tree planting.

The Lattabrook woodlot, unlike the Donaldson "woodlot" shown in our last issue, is still a going concern. It provides a steady income and is actually improving as a result of the type of selective cutting shown here

Thus began a pleasant and profitable relationship between a practical woodland owner and a public forestry organization. Let's look at the results: In the past two years, John Lattabrook and his son have taken a gross value of $5,062.33 from his woods. A little more than half of this represented cash sales, while the rest went into lumber (11,000 feet of it), fuelwood amounting to 40-50 face cords a year, and other odds and ends like fence-posts, which were used on the home place. For instance, the barn needed shingling. Cedar shingles were quoted at $18 a square for #1's, and $17.70 for #2's, but even at this price there were none to be had locally. So John and Henry cut down one of the large hemlocks, 36 inches through, and with a rented shingle machine got out 20 squares of first class shingles, worth $360, for an outlay of about $38.

The balance sheet of the Lattabrook operations tells the story of how common sense forest management pays. In the past two years, gross receipts from sale of products amounted to $2,642.77. The estimated value of the forest products used on the farm was $2,419.76, bringing the gross total of all products harvested up to the $5,062.53 which we quoted before. For hire of labor, purchase or rental of tools and equipment they spent $1,626.60, including 842 hours of their own labor which they valued at $1 per hour. If you deduct this from the gross, it leaves a net return of $3,435.93 for two years operation or an average annual profit of $49.08 an acre. And it is *really profit*, since the operations have done no harm to the woods; on the contrary, through thinnings and removal of old and defective trees, it has improved the composition of the woodland and has increased the growth rate.

John and Henry Lattabrook and their 35-acre woodland are hardly typical of the owners of New York's 10 million acres in private ownership. They had a good stand to begin with and are determined to maintain a good or better forest while they harvest its annual growth. In other parts of the State, it may take a longer time and considerably more acreage to show comparable results; but as the Lattabrooks discovered, the best policy for the woodland owner is to find out what he has and what can be done with it, before making decisions that are going to affect the character of his woods for the next 40 years.

—E. W. Littlefield, *Sup't. of Forest Investigations*, and W. W. Clingan, *Forester, District 3*

WOODLOTS, GOOD AND BAD

In this article, and in the one on "The Donaldson Woodlot" in our preceding issue, we have tried to show both aspects—the good and the bad—of private forest problems in New York. "Homer Donaldson" and "John Lattabrook" are, of course, fictional characters and their woodlots as we have described them are composite types, representing many hundreds of similar woodlots throughout the State.

Let us point out, however, that the figures on costs and returns in the "Lattabrook" lot are actual case-history data from a woodland owner in central New York who is co-operating with this Department under the Forest Practice Act.

FOR A STATEMENT OF OUR FOREST POLICY TURN TO THE NEXT PAGE

State of New York

FOREST POLICY

A Brief Summary

IN spite of the publicity given various aspects of our work by this magazine and many other agencies, I was recently asked if the State of New York had what might be called a *Forest Policy*. It has. Although it is difficult to state this policy in so small a space, it seems important that at least the general outline be made known to our readers.

The State's forest policy is definite and comprehensive. It deals with all types and classes of forest lands and forest land ownership in the State. Various items of policy have been developed during 60 years by constitutional provisions and laws, as interpreted by the courts and by opinions of Attorneys-General.

Forest Protection. The Conservation Law provides for protection of forests of the State from fire, insect pests and tree diseases. It is mandatory that the Department maintain a fire control system in certain so-called Fire Towns in the Adirondack and Catskill regions designated by the Law. The Department is authorized to extend this system to "Fire Districts" in such other parts as it feels the fire hazard requires. In towns not covered by the system, the law provides the Town Supervisor be superintendent of fires and responsible for forest fire control. The Department has charge of forest fire control on 22,330,000 acres which include practically all parts of the State where extent and importance of forests justify State control. Control of insect pests and tree diseases is State-wide. Protection activities, against fire or pests, are applied to both State and privately-owned lands, as protection is basic in any forest policy.

State Forest Preserve. Section 1, Article XIV of the Constitution provides that the Forest Preserve be forever kept as wild forest land. Construction of certain highways, ski trails and reservoirs is provided for.

These provisions prevent application of forest management to the Preserve as a whole. However, an opinion of the Attorney-General in 1927 holds that the thinning of forest plantations on such lands may be carried on by the Department to promote the growth of these artificially established forests. Aside from such cultural work in these plantations, management within the Preserve must be restricted to protection from fire, pests and diseases. The Department has had a reasonably effective system of fire control in operation since 1909 and recently has taken steps to protect the Preserve from serious insect and tree diseases, particularly gypsy moth and white pine blister rust.

Nothing in the Constitution prevents use of the Preserve for recreation. The Conservation Law provides State lands within the Adirondack and Catskill parks be forever preserved and maintained for use of all the people. To make the Preserve accessible to the public and to safeguard the forests from fire, the Department has a policy of creating large campsites for public use. At these sites, space for parking cars and pitching tents is provided; also sanitation, drinking water supplies and bathing facilities.

A system of some 600 miles of trails in the Adirondacks and Catskills has been developed and is maintained by this Department. Along these trails are open camps, or lean-tos, for public use. All these developments are in accord with the opinion of the Court of Appeals in the Bob Run case, which held all such developments and improvements are permissible which do not call for the removal of timber to any material degree.

State Forests. The enlarged reforestation program was initiated in 1929, pursuant to Section 60-a of the Conservation Law, which provides for the acquisition by the State of lands best suited for reforestation, and for planting and management of those lands. More than 500,000 acres of sub-marginal agricultural lands have been acquired, and these lands have been converted into State forests for the production of timber, for watershed protection, for wildlife management and recreation. The Department has authority to practice forest management and is endeavoring to use the best type of forestry possible on these lands, to promote timber growth and other forest crops, and to demonstrate to the private landowner the possibilities inherent in good management.

Community Forests. Encouraged by 1916 legislation, counties, cities, towns, villages and school districts have created 691 community forests. Free planting stock and advice on management is continuing from the Department. Subsequent legislation has provided financial assistance to counties. Fifteen counties are now participating in the program.

Private Forests. Privately-owned forests and woodlands make the greatest contribution to the State's timber production; the State owns about 3,000,000 acres; private landowners hold more than 10,000,000. The Department's encouragement of the practice of forestry on privately-owned lands dates back to 1908 when provision was made for distribution of planting stock to private landowners for reforestation. Every year millions of trees are furnished them at

"not to exceed the cost of production." But until recent years, the greatest help given the private landowner has been establishment and maintenance of an effective system of forest fire control and giving help in control of tree diseases and insect pests.

However, important as it is for landowners to reforest sub-marginal agricultural lands, it is equally if not more important from the timber production standpoint for them to place their natural timberlands under forest management. Under provisions of Section 60-d, known as the Forest Practice Act, enacted in 1946, the Department is able to do much to promote the practice of forestry on natural forest lands in private ownership. (See preceding article).

Forest Taxation. It has long been recognized that taxation of forest lands frequently constitutes a barrier to the practice of forestry. Section 13 of the Tax Law, known as the Fisher Forest Tax Law, provides for certain tax relief to owners of forest land, but very little advantage has been taken of this statute.

Education. If forestry is to be practiced in the State, it is important that there be foresters available to do the work in the woods. Realization of this fact led to establishment by the State of a College of Forestry at Cornell about the turn of the century and later of the State College of Forestry at Syracuse University in 1911. Besides instruction leading to a degree in forestry, a year's course is conducted at the State Ranger School operated by the College. This Department through its Division of Conservation Education is seeking to advance the cause of instructing the public in the basic principles of forestry.

The State's forestry policy may be summarized as follows:

A system of State-wide protection of the forests of the State from fire, insect pests and tree diseases; protection of the Forest Preserve, accompanied by the development and administration of such recreational facilities as are in accord with the provisions of the State Constitution; the acquisition and management of State forests created outside the Forest Preserve to render sub-marginal agricultural lands productive, and to demonstrate the possibility of forest management in the production of timber and other forest products, including wildlife; the giving of assistance to private landowners through providing forest planting stock at cost, through tax relief for certain forest lands, through the giving of free technical assistance in the management of natural forests and woodlands privately owned; and a program of education for both professional foresters and the public.

—WILLIAM G. HOWARD, *Director, Division of Lands and Forests*

Report on the Angler

A scientific study specially conducted for this magazine

A MILLION fishermen can't be wrong—only different. A story-survey of the life, loves and psychology of the man with the hook must result in a breakdown, not only of the investigator, but in sportsman types. Just as some hunters rather than game should be shot, so some fishermen should take the pledge to live the normal life.

Unfortunately game books will tell you much about underwater life, but very little about the out-of-water life that tries to snare it. All surveys end with certain kinds of fishermen clearly established. Watch for these:

MOROSE TYPE

(The doggedly faithful with the Digger O'Dell personality.)

Native Habitat: Usually lives in or about cities.

Where Found: Usually in a boat, in vicinity of seat.

Identifying Marks: Looks like sitting edition of Man with the Hoe, or The Thinker with corncorb. Grunts when questioned. Stares moodily when fisherman in nearby boat pulls in big catch. Usually ends day by departing silently for home, where he will sit for hours making up mind whether to go to bed or indulge in hidden vice of reading Whizzbang.

ELBOW BENDER

(Proficient in tying loads onto anything, mostly himself.)

Native Habitat: Since all fishermen come from and eventually go to the same place, we can dispense with this paragraph from now on.

Where Found: Stream banks, saloons, boats, saloons, camps, saloons.

Identifying Marks: The happy look of a man waking up at 5 a.m. to find the sun pouring into his face. Eyes have heavy creels hanging under them. Has learned to cast a mean jigger into aperture not larger than his mouth. Life cycle is daily; about mid-afternoon hatches into barfly stage. During hunting season can be heard bellowing instructions to keep quiet. During fishing season found on stream banks, snoring. Floats opinions on raft of alcoholic odors.

PERSONALITY KID

(Peter Pan in Waders.)

Where Found: Alder bushes, stream banks, river's edge or neighborhood "restaurant".

Identifying Marks: Nauseating cheerfulness, especially when the fish aren't biting. Usually asks for match as you get the biggest strike of your life. Always out of sinkers, bait or cigarettes, and requests come after victim has been softened by stream of chatter. Is terrific fisherman with most of catches in hands of absentee taxidermist and snaphots in albums back home. Invariably asks you to drop in when you're in Oregon, but forgets to give address.

CHIVALROUS TYPE

(The Fresh-water Goon, very common.)

Where Found: Hell, there's one in every stream.

Identifying Marks: Usually operates on theory (when with wife) that only one person can occupy pet rock in pet stream. Usually found occupying it. During courtship stage operates on theory that the smaller the rock the bigger it is for two. In cases like this, where the female is being shown how to fish, he usually demonstrates the wrap-around technique.

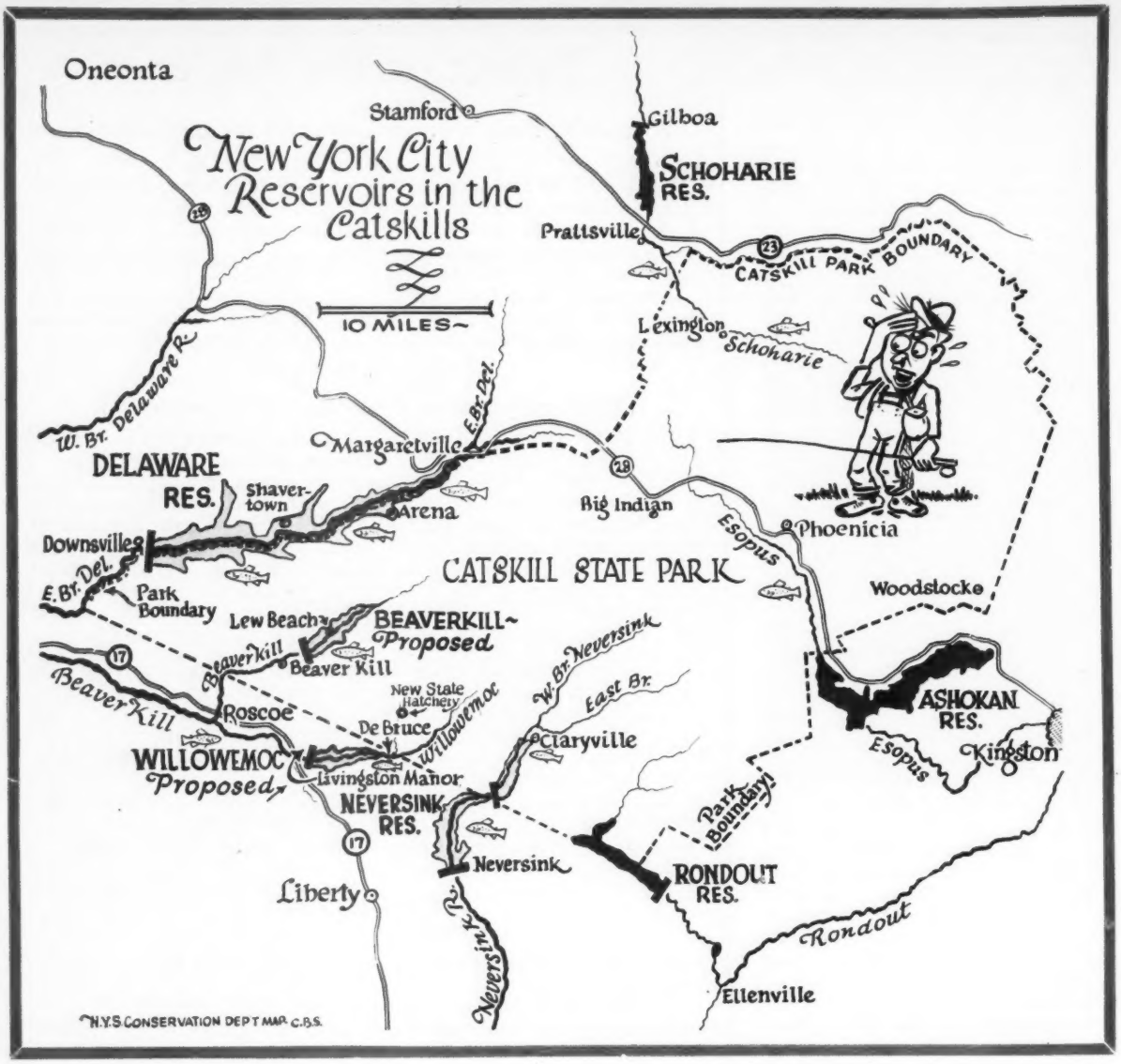
I'M-A-YESTERDAY-MAN-MESELF TYPE

(The man you meet today who caught his limit yesterday.)

Where Found: Anyplace, anytime.

Identifying Marks: Watch carefully for enthusiasm. When asked how fishing is, you hear how it was. Nuff said.

—BARNETT FOWLER



WATER FOR GOTHAM

The reservoirs of New York City—built, building, and to be built

MOST New Yorkers are aware of the fact that when they open a faucet in the Big City the water that runs out comes from somewhere in the hinterland, perhaps fifty miles away. But not so many are aware of the complexity or immensity of this system. Sportsmen, however, are watching its continued expansion closely and with a nervous eye as many miles of the State's finest trout streams are being swallowed up. Still, most of them realize that their interests must be compromised some way or other according to the water needs of a great and still growing city.

THE City of New York is today supplied by a total of 30 reservoirs. All together, they have a storage capacity of approximately 286 billion gallons of water.

Under construction at the present time are three additional reservoirs, one on the Neversink, a second on the Rondout, and a third on the East Branch of the Delaware River.

Proposed and under consideration are two more, one on the Beaver Kill, the other on the Willowemoc.

●

The 30 storage basins now owned and operated by New York City tap four so-called watersheds, the Long Island, the Catskill, the Croton, and the Bronx and Bryam. The first to be developed by the city authorities was the Long Island; Hempstead and Pine Ponds were built in 1862. Then came Smiths in 1873, then Hempstead Reservoir in 1879. Massapequa was placed in operation in 1891, and the following year East Meadow and Wantagh.

The Long Island system provides New York with a total storage capacity of 1,038,000,000 gallons—an astronomical figure, but smaller than that for any of the other watersheds.

The Croton watershed is by far the largest, with 18 basins supplying water for the city. These include Boyd's Corners, Middle Branch, East Branch, Bog Brook, West Branch, Amawalk, Croton Falls, Croton Falls Diverting, Titicus, Cross River, Muscoot, New Croton, Lake Mahopac, Lake Kirk, Lake Gleneida, Lake Gilead, Barrett's Pond and White Pond. This watershed has a total storage capacity of 103,100,000,000 gallons of water.

In the Bronx and Bryam watershed are two reservoirs, the Bryam and the Wampus, both constructed in 1897. Together they have a storage capacity of 1,047,000,000 gallons.

Although the Croton watershed is the largest in point of area, the Catskill system has a much greater storage capacity. Its three reservoirs—the Ashokan, the Kensico and the Schoharie—are built to contain a combined total of 180,752,000,000 gallons. As a further distinction the Catskill system reaches farther north than any of the others and is in the process of extending itself.

Already New York's reservoirs occupy a very substantial acreage on the face of the land. The Schoharie system, for example, covers a water surface of 1,145 acres; Ashokan, 8,316; Kensico, 2,218.

It may seem to the layman that New York's existing reservoirs should be ample to supply the city's needs. Yet it is interesting to note that city authorities are so concerned about a possible shortage that they have a crew of trained personnel whose work includes checking leaks in the system. The leakage problem has proved a big one. The average underground leakage located and stopped yearly in the boroughs of Manhattan and the Bronx approximates ten million gallons daily, or more than three and one-half billion gallons a year. Leakage from plumbing fixtures is also important. In a house-to-house survey of about 580,000 unmetered buildings, begun in 1934, out of a total of 12,500,000 fixtures examined 400,000 were found to be leaking. As a result of corrective measures taken the following year, it was estimated that a reduction in loss of 50 million gallons a day was effected.

So much for Gotham's reservoirs as they exist today. A great deal more could be and has been written about them, but our interest is naturally focused on the new ones that are now building and on those that may be built.

The three now building—the Rondout, the Delaware (East Branch) and the Neversink—are in the Catskill watershed. According to maps available to this Department, the Delaware will be the largest. The barrier dam will be located about one mile above Downsville on the East Branch, and the water will reach to just below Margaretville. The average width of the lake created will be about a half mile.

To be flooded by this dam are several miles of highway, the roadbed of the Delaware and Hudson Railroad, and several schools including Miller Hollow, Huntley Hollow, Jacksonburg and Delaware. Villages to be inundated include Arena, Union Grove, Shavertown and Pepacton. This reservoir will be fed by such immediate tributaries to the Delaware as the Platte and Tremper Kills, Mill, Lower Beach Hill and Holliday Brooks, and Coles Clove and Barkaboom streams.

The Neversink, when completed, will average a half mile in width and at its widest point will be one and one-half miles. It will be approximately 11 miles long, as compared to 20 for the Delaware. The dam will be located upstream from Hasbrouck and the basin will end below Claryville, almost on the Ulster-Sullivan counties line. This reservoir, under construction for the past several years, will flood the community of Neversink as well as several miles of highway. Such immediate tributaries as Black Joe and Dry brooks will flow into it.

The Rondout, also under construction for several years, has its barrier dam at Lackawack, flooding most of that community as well as Montela and Eureka. When the basin fills to capacity the waters will reach almost to Grahamsville. In the process of swallowing up more than seven miles of the Rondout this reservoir will achieve an average width of three-quarters of a mile. The basin will reach to a point about three-quarters of a mile from Lowes Corners.

Of the three reservoirs listed above, it is understood that the Rondout will be the first to be put in operation.

All of which covers—briefly—the additions to New York's water system that are actually in the process of construction. Besides these, two more sites also in the Catskill Watershed are receiving serious consideration from a long list of possibilities.

One of the proposed reservoirs would be built on the Willowemoc. Upon completion it would be approximately three and one-half miles long and would have a maximum width of three-quarters of a mile. The dam would be a mile east of the community of Livingston Manor, northeast of Round Top Mountain. The village of Parkston would be flooded. Sprague Brook would be the principal tributary flowing into the lake.

The Beaver Kill reservoir, also under consideration, would be bisected by the Ulster-Sullivan counties line. The water would be backed up four miles and would have a maximum width of one mile. The village of Lew Beach would be flooded.

●

As we stated earlier, the extension of New York's water system is being viewed with misgivings by trout fishermen from all over the world who in the past have relied heavily upon such famous streams as the Neversink, the Willowemoc, the Beaver Kill, the East Branch and the Esopus, some of the best parts of which will be flooded. It is not just that many of the best fishing miles of these streams are being swallowed up; the "fishability" of the miles that remain is radically changed by having a sizeable lake built in mid-course with the volume and regularity of flow below the dams a question.

This Department has no authority over these lakes except to enforce the Conservation Law if and when fishing is allowed on them. The reservoirs are owned and operated by the City of New York; in order to fish on them it is necessary to obtain permission from the city's Department of Water Supply, Gas and Electricity. Around each reservoir is a strip of land, also city-owned, wide enough to permit effective patroling by guards hired by the city.

New York City, like many another, has grown during the past few years and is still growing. Also growing are its demands for water, good clean water —in other words, good fishing water. It appears that at the present time the sportsman has no alternative but to accept this situation philosophically.

—BARNETT FOWLER

Winslow Homer—Artist

A GREAT PAINTER WHO LEFT AN INSPIRING RECORD OF THE ADIRONDACKS HE KNEW AND LOVED

By JAMES W. FOSBURGH

"THE RISE"—painted on Mink Lake in late spring *(Courtesy of Charles R. Henschel)*

"CASTING IN THE FALLS"—the dam on Mink Outlet *(Courtesy of Charles R. Henschel)*

"HUNTSMAN AND DOGS"—painted on Beaver Mountain

THE signature used as title—"Winslow Homer—Artist"—is reproduced from a picture of a leaping trout given by Homer to his guide and companion on many fishing expeditions, George Van Folsom. It was perhaps the painter's humorous way of suggesting to his old friend that he was an artist as well as a fisherman. Winslow Homer was both, a fact which in part explains his unique position in the history of American painting, a man revered as no other painter has been both by art critics and by those with no special knowledge of art who simply live in and love the American landscape. For Homer saw the American wilderness with the eye of the hunter and fisherman, the lumberjack and the river driver, and with the eye of a poet as well.

ountain after fire burned through from Vandewhacker

(Courtesy of Philadelphia Museum of Art, William L. Elkins Collection)

Winslow Homer was born in Boston in 1836. His complete independence of spirit, his peculiarly native genius, displayed itself early. As an artist he was entirely self-trained, completely eschewing art schools, and this same attitude led him to avoid all outside influences. At a time when all artists went to Europe to study Homer never even visited France, then as now the cradle of all artistic innovation. Early and late throughout his life he pursued almost fanatically his own purpose; painting the American scene as he saw it. Today his pictures are considered by art critics and laymen alike to be the greatest representation of the subject that has ever been achieved.

Homer first went to work for a lithographer in Boston, but soon gave it up to become a free-lance illustrator. His first important works were the drawings and paintings of Civil War subjects, commissioned by Harper's magazine. Subsequently he painted at various times in Massachusetts, New York City and upstate New York, where he lived for a time near Kingston. His fame rests primarily, however, on his pictures dealing with the lives of fishermen on the Maine coast, the paintings of the Caribbean Islands and the Florida wilderness, and his great series of Adirondack watercolors.

All the pictures reproduced here originated in the Adirondacks. Homer first went there about 1870 when he was 34, painting and fishing in the neighborhood of Keene Valley, and from about 1880 almost until his death in 1910 he spent part of every year working near Minerva in Essex County, where he is still affectionately remembered and where many legends are told of him. At the North Woods Club, of which he was a member for many years and where he painted all of the pictures we show here, the spring where he cooled the whiskey bottles (an essential part of his painting expeditions) is now named after him, and close by are the subjects of many of his paintings—Beaver Mountain, Mink Lake, the falls in Mink Outlet. They still look exactly as they did in his day, although the burnt land (above) is now in second growth.

Homer once said: ". . . the rare thing is to find a painter who knows a good thing when he sees it! It is a gift to be able to see the beauties of nature." He was that rare thing, the gift was his. Undoubtedly his great technical mastery

was in part the product of his acute powers of exact observation—it has been said of him that he was the only painter who really painted green, green—but it was also due to his love for and fidelity to nature.

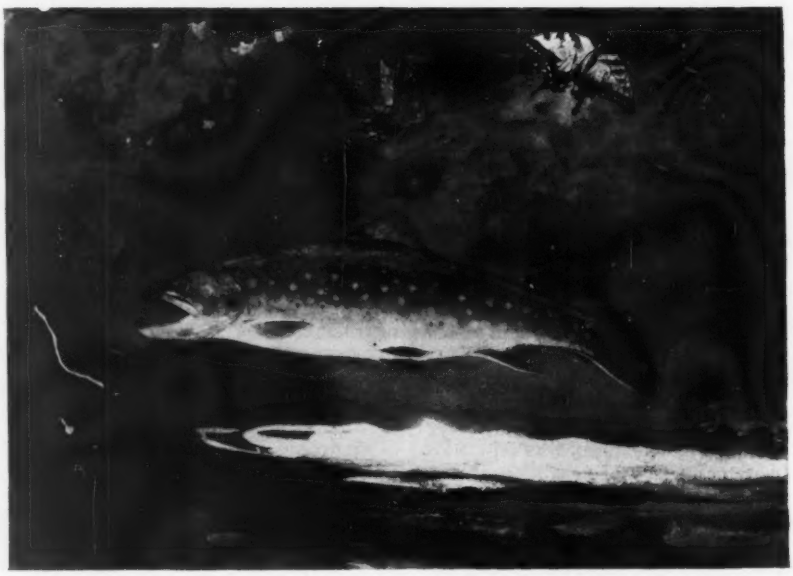
Great art has been called the expression of the universal in terms of the particular. The particulars Homer so loved and painted so well are all in these pictures. Here can be seen the dark water of Adirondack ponds, broken by the silvery wake of a canoe, the tumult of a swollen brook in spring flood, the overcast skies of a perfect fisherman's day, and the fisherman himself, and the hunter pausing to rest against the blue distance of receding hills. And here also are all the other things that cannot be seen but can be felt, and which imply a whole world and way of life: the stillness in the deep woods, and the hush over a summer pond, broken only by the humming of gnats, the sad clear whistle of a white throat, the occasional splash of a deer munching lily pads, or the loon's call. The sheer wonder of the whole physical world is evoked by each minutely observed and meticulously rendered detail.

It is true that some of the details known to Homer are changed today or have altogether disappeared, but this fact gives the pictures added interest as historical documents. The trim lines of the Adirondack guide-boat are now a rare sight, although Willard Hanmer is still making them at Saranac Lake (see THE CONSERVATIONIST, June-July issue, 1948). Deer are no longer hunted with hounds, or on lakes, nor for that matter in the summer. But the thrill of a good shot is still a familiar excitement; everyone has sweated under the protections required to ward off black flies in June; and who has not been half humorously exasperated by the ubiquitous and infuriating "punkin seed" who with idiotic persistence eternally thwarts the purpose of the most perfect cast. Finally, wooded or barren mountainsides, the mirror of a lake in the mysterious depth of a valley floor, shifting patterns of cloud and cloud shadow, the changing light of morning and evening, good weather and bad, can still arouse longing and excitement and at times serenity in all of us.

Such things are part of the American heritage, whether their source be the Florida swamps, the Texas prairies, or these Adirondack hills. The measure of Winslow Homer's stature as a painter is gauged by his ability to give tangible shape to this universal comprehension in terms so immediately real and particular. It is an ability which defies exact definition and can only be implied by the word he proudly and rightly applied to himself—artist.

"HOUND AND HUNTER" *(Courtesy of National Gallery of Art, Washington, D. C. —Gift of Stephen C. Clark)*

"UNEXPECTED CATCH" *(Courtesy of Charles R. Henschel)*



"TROUT BREAKING" *(Courtesy of Museum of Fine Arts, Boston)*

FISH FACTS

THE "new look" in fish management was also rather startling at first. The "old look" had a homey and comfortable touch about it: "The more fish you stock, the more fish you'll catch." It was as simple as that—or so we all thought.

It all started with the comparative ease with which trout could be artificially propagated and successfully stocked. This led both fish culturists and sportsmen to believe the same good results could be obtained with warm-water species and it was only natural, therefore, that one of the first efforts in warm-water fish propagation should be with the smallmouth bass, the fightingest of fighting species.

So the fish culturists rolled up their sleeves and went to work. And ran head-on into a whole flock of new problems. It was soon found that bass could not be stripped. Eggs and milt can be taken from trout quite easily by an experienced hatchery man; bass, however, just won't co-operate. This was mighty disconcerting to the early fish culturists, but they refused to remain frustrated for long.

"We'll let the bass spawn naturally and take the resultant fry," they said.

"Honeymoon boxes" were invented. The smallmouth bass, you know, is a nest builder and these boxes were imitations of the natural nests. The bass seemed to like the cozy arrangement, but getting tenants for these love nests meant that breeders had to be netted from wild waters and paired off. And that was only the beginning. As soon as the baby bass hatched, Papa and Mama Bass began to gobble them up. Bass are extremely cannibalistic. Undaunted, the fish culturists circumvented this by removing the parent bass from the nest when the eggs hatched, and to keep the school of fry intact a large circular screen was placed around the nest.

Then came the saddest blow of all: the fry would not feed on artificial food. With trout, it's only a matter of a few days before the newly-hatched fry take their finely ground liver, melts, etc., with lip-smacking relish. But the bass is more finicky. He only relishes his victuals if they are alive and on the hoof—or rather, on the fin. In the first feeding stages, for example, *Daphnia*, a small microscopic crustacean, is a favorite entree always in good demand.

The fish culturists began to culture *Daphnia* so that it would be available for the bass at the right time. At the Department's South Otselic bass hatchery, for instance, several *Daphnia* ponds are connected with the main bass rearing pond. As each pond matures or ripens a valve is opened and the *Daphnia* flow down to the hungry bass.

But this doesn't stop the cannibalism. The small fry unfortunately inherit the worst traits of Papa and Mama Bass and start feeding on each other. It follows that the small bass have to be removed as soon as possible or production takes an awful beating, and therefore the hatchery man wants to see them planted before cannibalistic predation takes too much of a toll.

And here comes another big headache—a fair distribution of the product. The fairest way would be to pro-rate the entire output among all the bass waters of the State. But if this were done with our present output, each water would probably get only half a bass.

AT this point field men, fisheries biologists, come into the picture. As a starting point in solving the problem of putting young bass where they will do the most good, the biologists made studies of the number of eggs naturally produced by the smallmouth bass in open waters. During the Biological Survey of the Delaware and Susquehanna Watershed, one of the experts took on the task of counting the number of eggs in female bass. This is the kind of chore that booms the padded cell business. By careful count one ovary of a nine and thirteen-sixteenth-inch bass contained 2,574 eggs. Doubling the number (there are two ovaries) gives a figure of 5,148. A 15½-inch specimen contained 11,428 eggs. A very conservative estimate of the number of eggs produced by a bass of moderate size might be approximately 4,000.

The excellent parental care of bass is well known. A high percentage of hatch can, therefore, be expected, but subsequent cannibalism often offsets this good start. Let's be extreme here and say that mortality from egg to legal size is 99 per cent. A one per cent survival would mean about 40 bass from each breeder for the business end of a fishing line. Therefore, if there is just one pair of 10-inch bass in a body of water, there will be more bass produced naturally than it would ever be possible to stock with artificially propagated bass on a state-wide, uniform, pro-rated basis.

IT can be seen that bass are so prolific that the addition of hatchery-reared stock is seldom worthwhile from the biological viewpoint. And, in dollar and cent returns, artificial production and the restocking of bass have been costly procedures and have not resulted in the benefits to fishermen that were originally anticipated. As a corrective measure to improve fishing, then, the stocking of bass in waters already containing wild bass is often of doubtful value, to say the least.

There are, however, situations in which careful investigation by this Department might indicate that bass stocking would be a worthwhile proposition:

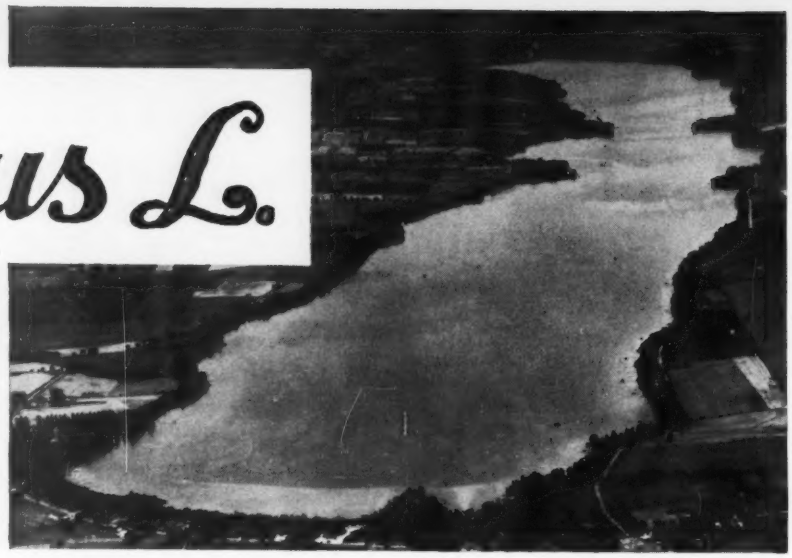
1. Original introduction into new waters, such as newly-constructed reservoirs, lakes, farm ponds, etc.
2. Aquatic situations in which conditions are suitable for bass but where natural reproduction is limited. For example, some reservoirs used for water supply have fluctuating water levels which upset natural propagation.
3. Sometimes sportsmen's clubs wish to attempt to raise bass to larger size in rearing ponds. This Department feels it should make every effort to co-operate with such well-meaning groups.

But, the planting of more young bass in waters already supporting the limit of their carrying capacity of this species is certainly a most questionable practice. The Department's new fish salvage program, where bass of the larger size—many full grown—are stocked, offers much more hope in future bass management.

—CECIL E. HEACOX,
Senior Aquatic Biologist

FISH FACTS is the first of a series of articles that we will run from time to time dealing with the activities and problems of our fisheries biologists.

Conesus L.



LOCATED in Livingston County about 25 miles due south of Rochester, Conesus Lake is a leading recreational spot of the Genesee country. Her Indian name Ga-ne-a-sos, signifying "always beautiful," is somewhat misleading for she is not now noted as a beauty queen as are some of her sister Finger Lakes to the eastward. Her reputation rests rather on her ability to produce an abundance of fish in the face of tremendous pressure, her serene habits conducive to safe boating for the novice and her ideal bathing facilities.

Conesus is not a large lake—only about nine miles long and one-half to one mile wide. It is shaped like an hourglass pinched in the middle at Long and McPherson's points. It lies at an elevation of 818 feet above sea level, has about 25 miles of shore line and a maximum depth of 66 feet.

Prior to settlement of the region, legend has it that the Seneca Indians, with permanent headquarters near Geneseo on the Genesee River a few miles to the westward, annually pitched their camps on a hilltop overlooking the eastern shore of Conesus where they spent the summer months securing and preserving by smoking a supply of fish from Conesus Lake. One of their favorite fishing grounds during the spring was an area toward the foot of the lake commonly known as Braddish Swamp. Here various species of fish common to the lake came to spawn and are said to have been taken in large numbers by the Indians. This swamp now has given way to the march of civilization, the area filled in completely.

At least one geography book published a generation ago reported Conesus Lake as being the home of the muskalonge. It can only be assumed that muskies were native to Conesus Lake and once perhaps one of the principal species, for residents now living who fished the lake fifty years or more ago claim that northern pike were never taken in those days. Although early records have been lost, it is known that muskalonge were stocked in Conesus Lake as late as 1936, when the practice was discontinued. In any event, the last muskalonge of record was caught off the pier at McPherson's Point in 1946 and the mounted remains of this fish, which weighed 21 pounds and measured 47 inches, are on exhibit.

It is also said that northern pike were stocked in Conesus Lake by the State many years ago. If so, these records have been lost. Shortly after the turn of the century, however, a northern pike weighing 38 pounds was taken, in violation of the Conservation Law at that time, near the swamp at the head of the lake. If this was a stocked fish, it indeed represented an early stocking.

IN any case, for years Conesus has been famous for its northern pike fishing. It is not what it used to be, however, because one of the principal breeding grounds at Braddish Swamp now has sprouted a colony of cottages. Breeding grounds at the foot of the lake are expected, however, to maintain northern pike fishing for many years to come on a satisfactory although somewhat reduced scale.

Before the invasion of concrete highways with their stream of autoists weekend bent, and within the memory of many not-so-old timers, Conesus Lake was serviced by special trains operated by the Erie Railroad. For years an excursion train ran from Rochester each

day to the railroad pier in Lakeville. On week-ends, two trains each day was the rule. Five steamboats at one time, two of which were over 80 feet in length and double deckers, carried these excursionists.

The old steamboats, the Ritz, the Jaeger, Alice M., and the double deckers, Conesus and McPherson, are long since gone. The remains of the old McPherson can still be seen lying in about six feet of water off the end of the abandoned railroad pier at Lakeville. Its rotting timbers serve as shelter for schools of rock bass which can be seen poking their noses from among the ribs of the old boat.

IN one generation the shores of Conesus, formerly occupied by an occasional farm house, have been literally lined with summer cottages. At last count there were 1,163 of these cottages with more in various stages of construction. This must set something of a record insofar as occupied shore footage is concerned because there is hardly space to squeeze in another camp. The trend now is to build them in tiers.

These colonists are banded together in the Conesus Lake Cottagers' Association. This association, which has been responsible for most of the civic improvements about the lake, is the backbone of the local Conesus Lake Sportsman's Club which for years has cooperated with the Conservation Department in various experimental research and management projects. Early efforts along these lines took an unusual turn when a suggestion was made by a Department representative that a two-foot contour map of the lake bottom would be a desirable background for management work. Without further ado, the following winter, club members quietly proceeded to make such a survey. A base line was laid out over the ice and a grid pattern established with intersections at 1,000-foot intervals. A hole was cut in the ice at each such intersection, the depth of the water measured, and a sample of the bottom secured, analyzed, and noted. The task of chopping so many holes prompted the invention by a club member of an ingenous electric drill operated from batteries and capable of boring a three-inch hole through 27 inches of ice in 13 seconds. A total of 4,000 holes were drilled through the ice that winter and the map prepared from the data accumulated is probably the most complete and accurate contour map of the bottom of any lake in the country. It is kept in Department files in Albany.

Many important advances in the realm of natural science have been the result of trial and error methods. Until recent years, this was the basis for many of the fish stocking programs throughout the State. Occasionally a species would be stocked in a certain body of water and for some reason or other would find what is known in scientific circles as an ecological niche or vacuum, where it could multiply and flourish without undue competition from other species of fish occupying that water. This phenomenon apparently took place when pike-perch (walleyes) were introduced years ago into the waters of Conesus Lake. The stocking program has continued up to the present with the introduction of 1,500,000 pike-perch fry each spring, so that now this fine fish is well established and furnishes excellent sport for those who know where to find it. In fact, walleyes have made themselves so much at home that they are now increasing under their own momentum, large numbers of breeding fish being found each spring in the tributary streams at the head of the lake.

The intensive stocking of smallmouth bass also has paid off, as evidenced by the high class bass fishing to be had along the edge of the weed beds in various parts of the lake. Bass stocking also is thought to have contributed another important result in the management of this lake. The yellow perch, a native species in this lake, increased in abundance to the point where there was a multitude of stunted fish but few large ones. For several years, they were so abundant that hoards of them died and were washed up on the shores in windrows to the disgust of cottagers. Bass stocked in the lake apparently took advantage of the existence of this large population of small perch and while the bass grew in size and numbers, the population of perch was gradually reduced to a point of relative balance. Good catches of large size jack perch are now once again the order of the day, especially during winter months when ice fishing near the head of the lake is a popular sport.

The story of Conesus Lake would not be complete without reference to hunting conditions to be found near by.

The swamp at the head of the lake is a breeding ground for black and mallard ducks and an occasional pair of blue-winged teal and woodduck. These, together with birds raised on other ponds and marshes in the vicinity, furnish fine early shooting. Later in the season, flights of canvasback, redhead and blue-bill are common and duck hunters, especially native residents who make a habit of watching the weather, occasionally take home the limit.

Deer of course are common throughout the territory and are causing considerable damage to agricultural interests. There has been an open season on deer since 1941 in Livingston County and this year an order has been adopted by the Department authorizing an open season on deer of either sex throughout a ten-county area in which Livingston is included. The decision to hold such a season in 1948 was based on complaints by farmers of damage to beans, small grain, fruit and nursery stock in neighboring areas.

Pheasants are more numerous in an area of about 25 square miles lying immediately north of Conesus Lake than almost anywhere else in New York State. This is one of those puzzles of Nature which often cause us to sit back, light our pipe and ponder it. Here is a large stock of wild pheasants living and thriving in apparent harmony with what is probably as large a population of foxes as will be found in any part of the State. Nor is this a recent phenomenon, for Livingston County was one of the first five to be opened for pheasant hunting in 1909. The area in question adjoins and includes in part the lands of the Wadsworth Estate, home of the Genesee Valley Hunt. This group has deliberately promoted the fox as a sporting animal for generations.

TIMES have changed in the Genesee Country, and hunting and fishing are not what they used to be. But we wonder sometimes if conditions have changed for the worse and if the picture is as dark as some would have us believe—or may it not be that the situation is as good or better than might be expected under the circumstances? We wonder just how far back we would really want to turn the clock. Listen to what William P. Boyd had to say about early wildlife conditions in this territory in his "History of the Town of Conesus" written in 1887:

"Conesus, before its first settlement by the white man, was the home of the beasts of the forest as well as the red man. Here they wandered forth from hill to hill, and valley to valley, in search of their prey; or like the little squirrel in its frolic, leaped in and out among the forest trees. Here the fox burroughed deep into the soil, and the wolf ran and howled in his lair; the wild-cat screamed at night, and the panther lay crouched in the bushes, waiting to pounce on his prey; while the deer came forth in early morning, into the clearings of the pioneers, to destroy their grain. . . .

"How far different it is today. Gone! Except a few smaller animals."

—ROBERT F. PERRY, *Dist. Game Mgr.*

NEXT ISSUE

LONG LAKE

WHAT DO YOU KNOW ABOUT *MINNOWS?*

As a physical creation the bait minnow is generally considered an animated pin-point in the overall fish picture—as comparable to a bass, for instance, as a chihuahua to a St. Bernard. But as a subject, the minnow is broader than a bait pail and longer than any fish line.

Although it is customary to call practically any small fish a "minnow", the name is used in a restricted sense as designating only fish of a definite zoological classification, the *Cyprinidae*. Many of the species of this group are small, but the family includes a wide variety of very large fish as well, the carp being one of the larger representatives. Throughout the fresh waters of North America, Europe, Asia and Africa, there are more than 1,000 species of minnow. South America, however, has none; in the natural dispersal of this fish, Nature made one of her usual inexplicable moves.

Classification is based on structure, of course, not upon size. The characteristic development of pharyngeal teeth bones and other structures examined only by ichthyologists serves to prove up on who is a minnow and who is not.

Because of the difficulty of checking on such details, bait pails often contain a wide variety of fish other than minnows. Sometimes the result is not a happy one, for a fast-moving public today is rapidly spoiling many fish waters by turning loose the contents of myriads of bait pails. This often creates chaos in a trout-filled lake, for isolated by Nature in small lakes or ponds, game fish often cannot stand up against introduced populations of undesirable competitor species. The sportsman should remember this fact. Once a seed stock of undesirable fish is started, multiplication may be by leaps and bounds.

I think it would be of interest here to note that use of carp or goldfish for bait is prohibited by law in an effort to prevent the spread of these species of minnow. It is true that most others are less dangerous to game fish production, although some of the larger types of chubs are undesirable. The fallfish or silver chub is one of these. The young make good bait, but the larger ones often prove to be voracious competitors of trout.

It is a fact that the specifications for a good bait minnow inside and outside the bait pail differ considerably. Considered as forage for game fish, the smaller species of minnows are most desirable because they do not grow too large to be fed upon. The emerald minnow, also known as the buck-eye shiner (see back cover) is a good example of a minnow which contributes suitable forage for game fish along the Great Lakes region. The Oneida lake pike fishermen and anglers in Lake Erie make use of this species for bait. Inside the bait pail, the horned dace is one of the most reliable performers since it will survive long transportation and hard use. Large ones, however, are actually too large and tough for the best production of trout in streams and ponds. These larger chubs often take the hook, or for that matter beat the trout in competition for natural forage.

No doubt many will fail to recognize the horned dace as shown on the back cover; he is the familiar chub of our ponds and streams. Most of those we encounter are much plainer in color and lack the "horns" on their noses, for it is only the full grown male chubs, during the breeding period, that become brilliantly colored and adorned with so called "pearl" organs. These are found on the head and fins of many species of minnow, and are considered to be useful during the spawning season. Male chubs build a nest of stones piled together and aggressively drive off rivals, making use of their "horns" to do so.

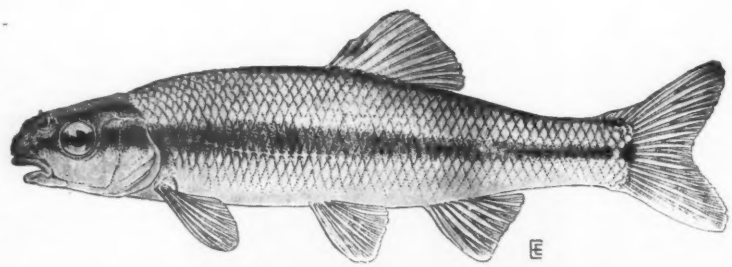
The golden shiner (see back cover) is a very familiar bait minnow, well suited for use in pickerel and northern pike fishing. It inhabits lakes and sluggish streams, spawning on water plants to which its eggs stick until hatched.

Another very common bait fish is the blunt-nosed minnow (see below), a fish that has a prominent part in the production of game fish, since it is an omnivorous feeder that can extract nourishment from algae and other vegetation. Its long digestive tract also can extract nourishment from aquatic animal life. Many other minnows have similar habits and this group of fish is an important step in the chain of game fish productivity.

No one can say what a black bass, pike or other game fish thinks about bait minnows. They swallow them first and do their thinking, if any, on a full stomach. But the contemplative angler may rest assured that the best service minnows can render him is not in helping him catch fish, but in laying down their lives as a vital link in the game fish production chain. It may comfort the angler to think of the transmutation of minnows into large poundages of game fish.

The entire subject of minnows, however, is a confusing one even to those who have made a profound study of it. A great many of the family have scientific names as long as the fish themselves, but to anglers and bait dealers the best minnows are those they can readily obtain and easily transport — those with enough of that "come hither" look to make a hungry bass forget such things as fish hooks and the patient, hopeful dope on the other end of the line.

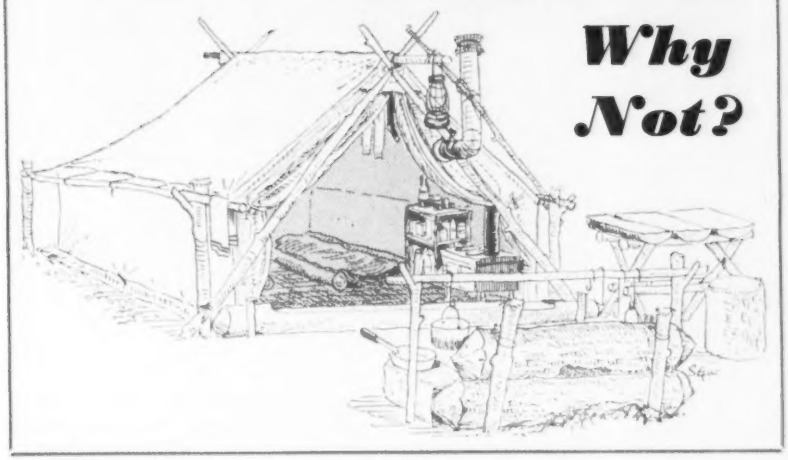
—JOHN R. GREELEY
Ch. Aquatic Biologist



Blunt-nosed minnow, *Hyborhynchus notatus Ratinesque*

INDIAN SUMMER VACATIONS

Why Not?



AS this is being written, our 31 public campsites in the Catskill and Adirondack forest preserves are bulging with the biggest group of campers in State history. It is estimated that by the end of this season, over one and a quarter million man-days of camp use will have been crowded into the short space of little over two months. And this is only a fraction of the total represented by private camps, tourist homes, boarding houses and hotel summer resorts.

Today, our mountains, ocean fronts, lakes, rivers, and vacation hinterlands are teeming with vacationists—but after Labor Day a mass exodus will leave them strangely empty just as they reach the most golden and perfect stage in the cycle of seasons.

The mosquitoes, black flies, deer flies, and punkies will be gone. Simmering summer heat and muggy days will give way to the crisp air of September. A dash of fall color will already show on the sumacs, the pin cherries and many others. And the air will carry the stimulating, if indescribable scents, of which only the fall season can boast.

Waterfowl, shore birds, and a myriad of upland birds will be active under the migrant urge and begin to flock up for their fall flights. Small mammals like the squirrels, the deer mouse, the chipmunk, and the raccoons, as well as the big black bear will begin to hit the peak of their preparations for the winter to come. The big muskies, pike, pickerel, and bass, which have spurned many a summer fisherman's lure, will suddenly become more voracious, gullible, and scrappy. Just wait and see.

It is, in short, the perfect vacation season for the camper, fisherman, hiker, and outdoors lover. It is being discovered and enjoyed by an increasing number, but still just a handful. Some of these few sometimes ask us why the State's campsites cannot remain in service for this early fall season. Up to now, our answer has always had to be that there were not enough people who would use them to make it practical. Even the cost of the modest wages paid campsite caretakers and helpers, the most economical operation of sanitary facilities, water supply, etc., could not be justified for so few.

It is this sort of a problem, plus a desire to make our outdoors more useful to more people that prompted your editor to ask us to write a few paragraphs on Indian Summer vacations—and here we use the term somewhat inaccurately to cover September and early October. In examining the possibilities of lengthening the conventional vacation season, we come first of all to the inflexible regulations which open most public schools immediately after Labor Day. Families with children of school age are thereby bound to return home. But even in such circumstances long week-ends are often possible, and there is a large group of people free to take vacations in the early fall. Probably the single biggest deterrent outside of school is the tradition that July and August are the only real vacation months. This tradition is already broken for some and is being badly bent for many others.

Which brings us down to cases. This year for the first time, and as a result of a demonstrated need, the North Lake Campsite in the Catskills will be kept open through September. Here we have a perfect example of the type of attraction offered by Indian Summer vacations. This public campsite is a gateway to the famous "Trail in the Sky" which starts at an elevation of 2,300 feet and follows the edge of precipitous cliffs for three miles to a top elevation of 3,100 feet. From this vantage point there is an unobstructed view of the Hudson Valley from Poughkeepsie to Albany and of the Taconics and Berkshires further east. This inspiring view becomes a giant masterpiece of color under Jack Frost's paint brush, and it draws people back each fall year after year.

Last fall, the Lewey Lake Campsite in the Adirondacks was reopened for the hunting season, and 147 separate campers used it for a total of nearly 900 camper days. Only a fraction actually bagged a deer. But everyone bagged a fine vacation.

Two years ago, the writer and Clayt Seagears took a walking tour through one of our biggest wilderness tracts in early November. From the Cedar River Flow to Little Moose Lake, down the South Branch of the Moose to the plains, then south to the West Canada Lakes. Those five days, for sheer enjoyment, will never be forgotten. A hundred such trips on shanks mare, or by canoe, are available to our people at the cost of a little gas, some lightweight foods, and some inexpensive or surplus equipment.

And it isn't just public campsites or roughing it on the trail which argue in favor of Indian Summer vacations. Hundreds of private camps, cottages, and resort hotels would welcome a longer season and adapt themselves to it, with benefits to owners and guests as well. At present, heavy overhead expenses and the profits for a year must come from a few weeks of income. A longer season should mean cheaper and better vacation service.

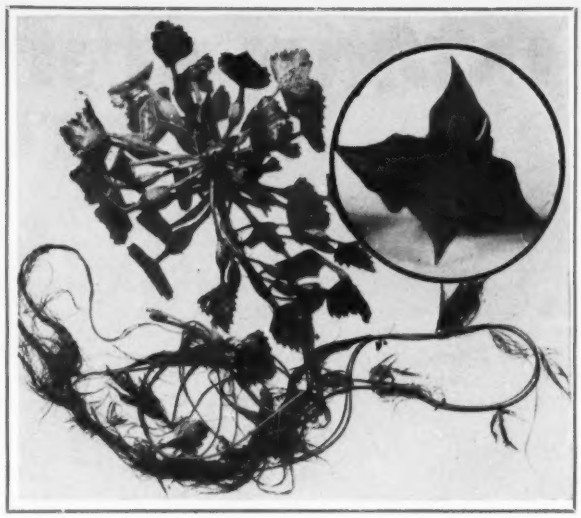
BUT don't take our word for it about these vacations. Crank up the family car some early fall weekend and head it toward the open country. Have yourself a personal taste of this wonderful season—*and let us know how you feel about it.* It is important that you do let us know because there is no good reason why more campsites and other facilities could not be kept open if there were real reason to believe that they would be used. All it takes is a little extra planning and budgeting.

By now it is accepted by nearly everyone that conservation, among other things, means wise use. It surely follows that if we can use our outdoors for three or four months instead of two, conservation will be better served.

—J. V. SKIFF, *Deputy Commissioner*

flora

The Water Chestnut



AFTER years of intensive effort, the Conservation Department apparently has developed an aspirin big enough to cope with a 64-year-old headache that has plagued sections of New York State ever since a man attempted to beautify a lake near Schenectady.

Just prior to 1884, an amateur botanist introduced the water chestnut into Sanders Lake, a spring-fed body of water in the Village of Scotia, separated from Schenectady by the Mohawk River. The object: to make the lake more attractive. In 1884, however, the tenacious qualities of the European plant were little realized. Today they are. Furthermore they are entirely unappreciated.

The water chestnut is a thoroughly objectionable weed, furnishing no beauty, but instead a solid, impenetrable blanket over a vast acreage of water. Its grip is such that it has virtually eliminated fishing and boating and swimming, as well as waterfowl, once it has fastened its hold.

From Sanders Lake (or Collins Lake as it sometimes is called) the plant drifted into the connecting waters of the Mohawk, there occupying extensive areas. Recently it has moved into regions of the Hudson River. Elsewhere in this country it has become established in the Sudbery River, Massachusetts, and in the lower Potomac.

In the Potomac it was attacked a few years ago by an underwater cutter, the same type used when elimination attempts began in Sanders Lake at about the same time.

Today the general situation looks more hopeful than heretofore. The Conservation Department, which has been working in conjunction with various municipalities, has turned its guns on the weed and the results are promising. Efforts, bolstered by Pittman-Robertson funds, have resulted in progress and actual control. Years ago it was "cut and pull", but today more modern methods are used. The new weed killer, 2-4-D, has been adapted to use on the chestnut by airplane spray method, and although this treatment has been found effective the work has just begun.

The reasons for the difficulty of elimination are many, but are easily understood in view of the background of the plant. Its ideal habitat is found in ponds, canals, quiet cover and slow backwaters. Rooting in the mud, the plant thrives in water from three to 16 feet deep. Many small rootlets provide anchorage in the ooze. An erect stem clothed with plume—like submerged leaves—rises to the surface where it terminates in a rosette of expanded leaves with inflated petioles that function as balloons and provide buoyancy to the plant. Each branch of the stem ends in a similar rosette. These may be so closely adjoined as to shut out light and thus contribute to the stagnation of the water, preventing other aquatic plants from growing among them.

The water chestnut is an annual, the seeds being viable for one winter only. In June or July the small white flowers of the rosette produce from two to four horned fruits or nuts which drop to the bottom to mature. On sloughing off the outer coat the nut becomes very hard in texture and metallic in appearance. The sharply pointed spines are provided with several backward-slanted barbs that may produce painful wounds if stepped upon. In the late autumn the plant dies down. Viable nuts sprout the next spring and a new crop appears each year.

In recent years the spread of the water chestnut aroused such interest in its control that detailed studies were carried on by the New York State Conservation Department's Biological Survey, particularly in that area, where infestation occurred in the Mohawk River. The report issued as a supplement to the 1934 Annual Report of the Department described the extent of distribution in the river, the biology of the plant and suggested methods of control.

THE nut, rich in starch, has some food value for the muskrat which has been observed feeding upon it. But, quoting from the 1934 report: "Any attempt to popularize the water chestnut for food purposes in this county is likely to be confronted with several objections based upon aesthetic, sanitary and economic grounds. The water in which the water chestnut best thrives is rather dirty and sometimes actually filthy . . . In certain parts of the world the liver fluke disease has been contracted by humans from eating raw water chestnuts . . . The contents of the nuts are undoubtedly clean, but the danger of contamination arises from the water in which they grow. To eat them raw would be taking a chance."

Objectionable characteristics of the water chestnut apparently far outweigh any economic value that may be ascribed to it. The expanse of dense vegetation at the surface and the tangled mass of vegetation present difficulties in boating and fishing. The old, empty nuts drift about and lodge on beaches causing painful and dangerous wounds.

The spread of the water headache in the 64 years it has had to become acclimated to New York has involved thousands of acres. Moreover, as the plant gains headway, its spread, if unchecked, would be unbelievably rapid. Every new year sees additional batches of it cropping up in new waters. It definitely is not good conservation to allow this weed to spread to the vast habitage that the lakes and waterways in the State might afford it.

It was in 1946 that the Conservation Department began its all-out battle against this pest. It may be additional years before the battle is successfully concluded, but whatever the effort, the results will justify all the research and energy expended.

—EMMELINE MOORE, *Chief Aquatic Biologist (retired)*

fauna

The Opossum

IN his "History of Virginia", Captain John Smith, the colonist and warrior whose name is inseparably linked with that of Pocahontas, noted with his quill pen: "An opossum hath a head like a swine, a taile like a rat, and is the bigness of a cat. Under the belly shee hath a bagge." Although later descriptions have been more definitive, no one has given a general portrayal more adequately.

In the opossum we have a fur-bearer not only native to this continent, but one which has for its common name a designation that is wholly American. It was first used to identify this animal by the Indians along the Atlantic Coast. The scientific name, *Didelphis virginiana*, is equally well chosen in that it designates the peculiar, double reproductive organs of the female as well as the location where this animal was first described (*Didelphis*—two womb, *virginiana*—of Virginia).

When Captain Smith observed that "Under the belly shee hath a bagge", he referred to one of the most interesting adaptations possessed by any animal. This bag or abdominal pouch is in essence a mobile fur-lined incubator in which the teats, usually about thirteen in number, are located. The young are born after about an eleven-day gestation period, weigh about 0.13 grams each and are grub-like in appearance. At this time these tiny embryo-like creatures possess enough muscular co-ordination and instinct to crawl into the pouch where they fasten to a teat and remain thus attached for about two months.

The guiding force which directs these blind, helpless, hairless creatures into the pouch has fascinated biologists for a long time. Moreover, it has given rise to many fanciful folk tales. What directs the young to their mother's pouch is unknown, but it has been repeatedly shown that they gain access without assistance from the mother. In this connection, an early scientist, Barton, stated: "The young opossums, unformed and perfectly sightless as they are at this period, *find* their way to the teats by the power of an invariable, a *determinate* instinct which may surely be considered as one of the most wonderful that is furnished to us by the science of natural history."

After each member of the litter has fastened its mouth to a teat, a natural provision prevents each from losing its hold. Moreover, students who have made the opossum the object of intensive study believe that the flow of milk to the young is regulated voluntarily by the mother inasmuch as the offspring are too imperfectly formed to suckle.

When about two months of age, the young become detached from the teats and then may leave the pouch to view the world into which they were so strangely born. They remain with the mother, clinging to her with claws and prehensile tail for approximately one more month, returning to the pouch for food or protection when necessary.

The opossum is relatively new in this State. Records of their presence in the vicinity of New York City have been frequent since the latter part of the past century, but their presence in upstate New York, as late as the middle 1920's, caused observers considerable excitement. The beast was generally unknown to them. It would seem that the opossum reached this State by a graduate process of extending its range to the north. At present it seems to be well established throughout the parts of the State where winter temperatures are relatively mild.

In our own locality (around Albany) observations indicate that the opossum will sometimes go to astonishing lengths to find food and shelter during the winter months. Three years ago an Albany County resident saw tracks in and around his garage and set a box trap. He caught an opossum. The animal was promptly released in a grove of pines a considerable distance off, only to be caught again a few days later—in another garage.

Near Amsterdam, again in the dead of winter, a man parked a delivery truck, leaving the door open and the motor running. Upon his return he was considerably disturbed to find an opossum sitting behind the steering wheel.

The increase in the population of this fur-bearer has been viewed with alarm by some sportsmen, who have visualized the opossum as just another predator. The opossum, however, differs from the celebrated predators such as the foxes and weasels in that it is a slow, seemingly dim-witted animal. Moreover, its choice of foods includes fruit, vegetables, both carrion and fresh meat, eggs or other fare into which it ambles. While there is a remote possibility that the opossum could be a serious predator, such a charge could logically be leveled at this animal only after a well designed study of its behavior indicated that it should be so classed. To date, there has been no such study.

IN the southern states the opossum is an important segment of the wildlife resources. There it furnishes food, sport and financial return to many people. In New York, however, few if any of these animals are eaten by humans, and consequently they are seldom hunted or trapped for this purpose. And since the value of an opossum pelt cannot be expected to exceed 50 cents, trappers cannot afford to make a concerted effort to harvest this species. In spite of this fact, however, more and more of these animals are accidently taken each year in traps set for other species, and the total value of opossum pelts is a factor not to be overlooked.

Although a new-comer to New York, it looks as though the opossum—whatever his shortcomings and recommendations—were here to stay.

—ART COOK, *Game Research Investigator*

Scattershots

NEW DEER LAW—At the last session of the Legislature, a law of considerable importance to both sportsmen and farmers was enacted. The law conveys to this Department authority to declare an open season on deer of either sex in a specified area (in general, the southwestern part) of the State, "whenever in the opinion of the Department deer in any county or portion thereof in the area described in subdivision two shall become numerous enough to cause damage to agricultural crops, or to cause over-browsing of deer range. . ."

In accordance with the purposes of this law, the Department has declared an open season on deer of either sex in certain counties this fall. (See "Do You Know Your Laws?"). But the important thing to note is the manner in which the decision was reached to declare such a season. Conferences were held throughout the affected area between sportsmen's federations, farm bureaus and individual farmers, with our District Game Managers in close touch with all proceedings. The open season is thus the result of a careful and thorough canvassing of the various interests involved. In particular, it proves that sportsmen and farmers—often supposed to be mutually hostile—can reach a mutually beneficial agreement by sitting down together and thrashing things out.

SHRUBS FOR WILDLIFE—In the fall of 1946, the Painted Post State Tree Nursery at Painted Post, was transferred from the Division of Lands and Forests to the Division of Fish and Game—for the specific purpose of raising game food shrubs and trees.

After a period of rehabilitation, the Nursery is now embarked on a program which will result in an annual production of about 2,000,000 shrubs for distribution in the State, principally on lands of co-operators with Soil Conservation Districts. This spring the Nursery beds contained 1,500,000 seedlings of multiflora rose, 500,000 silky dogwood seedlings, 50,000 hazelnut seedlings, and approximately 15,000 seedlings of bittersweet. All these will be available for planting during the fall of 1948 and the spring of 1949.

Plans are underway for putting into the ground enough seed to produce similar quantities another year; in fact the program calls for continuous production of the shrub stocks listed here. In addition, this summer seed is being put in to produce 100,000 nannyberry and 50,000 high bush cranberry which should be available for planting during the spring of 1950.

Emphasis now is entirely on the production of shrub stock. Still in the Nursery, however, are approximately 1,200,000 pines and Norway spruce.

TAKE YOUR CHOICE—In case our readers feel that we've been playing favorites in the matter of hermits, we herewith offer an alternate to Noah Rondeau of Cold River.

The Adirondacks acquired a new permanent resident and porcupines a direct route to oblivion several years ago when 76-year-old Archie Ranney, an ex-printer, read of the beauties of the State and came to see for himself. The fiery oldster liked what he saw so much that a week later, tired of civilization, he settled down in a cabin near Baker's Mills and in short order became known as "Bobcat Ranney", or "The Hermit of Tombstone Swamp". He's lived there ever since, existing on such delicacies as porcupines and muffins.

"Porcupine meat," says Bobcat, "has been badly underestimated. I ate 10 in 10 weeks once and liked every mouthful!" (Bobcat is still going strong.)

Mister Bobcat Ranney

MOBILE GAME PATROL – The Wiscoy Valley Conservation Club has developed an unusual answer to the mounting problem of the game law violator—a mobile game patrol, activated last April 3 and now being perfected against the forthcoming hunting season.

The Wiscoy club's territory consists of six townships and includes some 200 square miles of deer range as well as two of the State's best trout streams. In attempting to patrol this area, the club members directed their attention mainly to the highly organized, well heeled group who trafficked in venison for a high priced ready market.

This group was highly mobile, able to move rapidly in any direction on a network of back roads. So, as a convenient means of focusing the patrol's activities on a particular area, a grid-zone committee mapped out the county and divided it into squares; club members in each square act as eyes of the patrol; maps have been made and duplicate copies given to the Game Protectors; forums are held to keep all members abreast of new laws and changes; a full deputy sheriff is in charge of the patrols; special deputies are in each township; patrols operate around the clock at irregular intervals and on an indefinite pattern so that violators have no means of predicting their activities.

This would seem to be a system of law enforcement worthy of study by other groups in other areas.

COUNCIL MEETING—Annual sessions of the New York State Conservation Council will be at the Hotel Van Curler, Schenectady, December 2, 3 and 4.

At this meeting Assemblyman Harold C. Ostertag will present his anti-pollution bill, often referred to previously in this magazine and anxiously awaited. Dick Gerstell, Pennsylvania Game Department researcher now with the Animal Trap Company, will tell of the results of Pennsylvania's rabbit purchase and stocking program. Allan T. Studholme, Fish and Wildlife Service, who at St. Louis gave an analysis on the futility of stocking entitled "A Bird in the Bush is Worth Two in the Hand," will also address the convention.

CONSERVATION CAMPS – This summer for the first time, 340 boys are being taught the basics of conservation at two educational camps, one at DeBruce in the Catskills and the other near Ithaca.

The camps were planned by District Game Managers and are administered by directors from the teaching field. District Foresters, Rangers and Game Protectors, fish hatchery and game farm men, soil conservationists, trappers and others from the Department–together with experts from the industrial and business world–have been orienting the boys in the many phases of conservation, either at camp, in the field or at Department facilities nearby. It's not all-work-and-no-play. There's a good deal of baseball, volleyball, swimming, fishing and movies.

The boys in the majority were sponsored by sportsmen's federations and rod and gun clubs. Civic and fraternal organizations also underwrote some of the student-campers.

SALVAGE – The four fish salvage crews of the Department are at present carrying out trout rescue operations and special netting for the Department's fisheries biologists. They will continue their regular fish salvage netting in the fall.

This year's salvage of fish is 70 per cent ahead of last year. Up to July 15 this year the crews removed 68,857 pounds of game fish from reservoirs and other waters closed to public use and transferred them to suitable open lakes and streams. In addition they have removed 40,000 pounds of carp.

BASS LORE–The fisherman who finds an empty stomach in a smallmouth bass shouldn't always pride himself on hitting the area "just when the fish were feeding." Chances are that the fish had a good meal in its stomach when it was hooked. It is little known, but a fact, that when a smallmouth bass is hooked it begins to regurgitate (heave) food from its stomach. If played on the hook long enough all food may be tossed up and out. This is also a characteristic of many other species of fish.

BAND RECORDS, *PLEASE*–In attempting to learn more about what happens to game birds and animals, especially liberated stock, Department researchers have placed aluminum leg bands or ear tags on experimental specimens before release. Pheasants, ducks, snowshoe hares and cottontail rabbits have been marked in this way. It is highly important that anyone recovering a specimen having such a band or tag report the fact to the Department, giving the species, date, place and circumstances.

We want to emphasize that persons finding such specimens have not picked up something they shouldn't have. This applies at any time of year. The records are valuable. Please send them in.

WHAT KIND ARE YOU?

Are you an active member,
The kind that's liked so well?
Or are you just contented
With button on lapel?
Do you attend the meetings
And mingle with the flock?
Or do you simply stay at home
And criticize and knock?
Think it over brother,
You know right from wrong,
Are you an active member
Or do you just belong?

From "The Sportsmen"
Broome County Sportsmen's Ass'n.

PANTHER DAM–Testimony for and against the Panther Mountain dam proposal was concluded during early July at Watertown, but only that phase of the question was ended. Decision to abandon or go ahead with the dam on the South Branch of the Moose River will come from the Black River Regulating Board sometime after September 7.

In lengthy hearings which began in June and continued intermittently, both sides presented their arguments. The Black River Board urged construction of the dam for river regulation purposes and for betterment of sewage disposal conditions along the Black River. Those opposed contended that the ultimate effect of the dam would be solely to create increased power values along the Moose and Black. Attorneys representing the opposition were given until September 7 to file a brief based on the record of the public hearings.

PHEASANTS – Sportsmen and 4-H Club co-operators are now mid-way in their effort to help the Department exceed last year's all-time pheasant-stocking record. They are rearing 100,000 birds supplied by the Department to supplement the scheduled distribution of a similar number from the Bureau of Game Farms.

From the Delmar and Ithaca hatcheries 100,569 day-old chicks went out this year, with sportsmen receiving 61,690 and the 4-H'ers 38,879. More than 100,000 other chicks hatched at these incubator plants are being reared on the Department's seven game farms. They will be released prior to the opening of the season this fall.

The Department furnishes chicks–for rearing and release on unposted pheasant range–only to registered fish and game clubs and 4-H members cooperating with the Division of Fish and Game. Up to 4,000 birds per county are supplied the sportsmen on the basis of availability of approved facilities to handle them.

Out of the Past

A Record Trip in a Guide-Boat

MANY swift trips have been made in the Adirondack guide-boat–on errands of mercy, to the polls to beat closing time, and even to church to hear some noted preacher. But it fell to the lot of one Chester Stanton to establish a unique sort of record for the round trip between Forked Lake and Old Forge. He made the distance of 43 miles (seven of which were on carries) in nine and a half hours, rowing or carrying his guide-boat all the way.

Stanton first came to Blue Mountain Lake in 1881 to paint the old Prospect House, but he soon gave up painting for guiding so that he could enjoy the woods and at the same time get paid for it. At the time of his famous trip he was guiding for a Mr. Henderson at Forked Lake. One of Mr. Henderson's guests was a prominent politician by the name of Captain Goddard, and one day late in October Stanton was called upon to rush the Captain to Old Forge.

"We started at five a.m.," says Stanton. "He carried his suitcase and I carried the guide-boat. I got him through on time and was so early that I started right back and reached The Antlers at Raquette Lake at two-thirty p.m. Mr. Henderson and his family were there at dinner on their way down to New York and they wouldn't believe I'd been through until they heard it from Captain Goddard when they got to the city."

Stanton, now 85, was noted for his hunting prowess and had a reputation as one of the fastest men afoot in the woods. His feat with the guide-boat broadened that reputation. On this particular trip, however–or at least on the return part of it–he attributes his speed to the fact that he hadn't been home for a month.

Activities

UPLAND GAME–Surveys recently conducted by the Department have given an encouraging picture regarding upland game bird abundance this year.

With respect to pheasants, which have been on the decline for the past seven years, the downward trend appears to have ended and over much of the State's range they are more numerous than last year. Production of young birds is better than a year ago, especially in the Ontario Lake Plain section where the bulk of New York's pheasant population is found. It must be emphasized, however, that in spite of the change in trend the pheasant population is little, if any, greater than it was in 1946, when the birds were at a seriously low level.

Observations indicate that grouse are at a high level of abundance throughout their range in the State except for the western Southern Tier counties, where they continue to be relatively scarce.

Woodcock have been reported as more plentiful than during recent years. Last spring, for the first time, an extensive survey was made of breeding populations of this species in New York. Although comparable data for previous years were not available, the birds were found to be numerous and reports compare favorably with records from other parts of the Northeast, where previous observations have been made and where substantial improvement was noted.

BIOLOGICAL SURVEYS–Many inquiries have been received relative to the availability of the Biological Surveys. Of the 16 issued, two are now out of print–the Genesee and the Mohawk-Hudson–but any of the rest may be secured by writing the Conservation Department, Albany 7, N. Y., and enclosing a check, money order or cash (at sender's risk) to cover the cost.

The surveys were issued in this order: The Genesee River System; the Oswego River System ($2.60); the Erie-Niagara System ($2.25); the Champlain Watershed ($2.90); the St. Lawrence Watershed (including the Grass, St. Regis, Salmon, and Chateaugay Systems and the St. Lawrence between Ogdensburg and the International Boundary) ($2.40); the Oswegatchie and Black River Systems (including the lesser tributary streams of the upper St. Lawrence River and of northeastern Lake Ontario) ($2.20); the Upper Hudson Watershed ($2.80); the Raquette Watershed ($2.65); the Mohawk-Hudson Watershed; the Delaware and Susquehanna Watersheds ($3.80); the Lower Hudson Watershed ($4.25); the Alleghany and Chemung Watersheds ($3.68); the Salt Waters of Long Island, Part I ($1.15) and the Salt Waters of Long Island, Part II ($.75), joint surveys with the U. S. Bureau of Fisheries; the Fresh Waters of Long Island ($1.25); and the Lake Ontario Watershed ($2.50).

Authorization for the surveys was given by the Legislature in 1926. The enacting clause stated that the purpose of the surveys was "to determine the most practical methods of increasing fish production". On the studies of individual streams, lakes and ponds in the various watersheds, the Department's present fish stocking policy is based. The surveys were made over a period of several years and the findings–which include maps of many waters, species of fish present, color plates, water analysis and other data–were printed as supplements to the annual reports of the Department. Subsequent studies keep the information up to date.

The surveys will answer a myriad of questions that sportsmen pose to the Department day in and day out. They are a valuable addition to any library, particularly for the collector of sectional information.

EDUCATION–Milestones of the conservation education problem were hurdled last month. Setting was the austere Regents Room of the State Department of Education. Meeting there was the new Advisory Committee on the Teaching of Conservation in the Schools of New York. On hand were representatives of the State Departments of Education and Conservation, and the N. Y. Zoological Society's Conservation Education Foundation.

It was voted to recommend to the Board of Regents that three comprehensive studies be launched to determine: (1) what New York State's schools are doing in conservation teaching; (2) what they can do, and (3), ways to improve teacher aids. Further, the Committee recommended that what was termed "the best procurable conservationist-educator" be hired to dig into the problem.

Said Commissioner of Education Spaulding: "Conservation is an increasingly important factor in world affairs. One of the most important tasks education can perform . . . is to produce a citizenry aware of the need for conserving and using in an enlightened way the resources of the earth."

Said Conservation Commissioner Duryea: "Amen."

DO YOU KNOW YOUR LAWS?

Season on Deer of Either Sex

THE Department has ordered an open season on deer of both sex from November 24-30, exclusive of the intervening Sunday, in ten counties with exceptions in three. The counties opened are Allegany, Cattaraugus, Chautauqua, Erie, Genesee, Livingston, Niagara, Ontario, Steuben and Wyoming.

Exceptions: in Erie County, the area bounded on the north by Tonawanda Creek, on the east by highways 78 and 20, on the south by highway 20 and the westerly extension of highway 20-A from the intersection of highway 20-A with 20 to Lake Erie, on the west by Lake Erie and the easterly branch of the Niagara River; in Niagara County, the area bounded on the west by the Niagara River, on the north by route 31, on the east by route 78 and on the south by the Niagara River and Tonawanda Creek; in Ontario, the area north of highways 5 and 20 and east of Canandaigua Lake.

A special license is required, best obtainable from clerks of the ten counties, usable only in these counties for one deer of either sex. The hunter who takes a deer in this season cannot take another elsewhere in the State in 1948.

The laws in relation to taking, manner of taking, possession, transportation, tagging, reporting, purchase and sale that apply in these counties apply to deer of either sex.

ABOUT FIRES–Through July, the State had experienced a most satisfactory record of forest fire control. Reports have been received of less than 800 fires which have burned approximately 10,000 acres of forest, brush and grassland.

The Bureau of Forest Fire Control shows little elation, however, because the patterns of both forest fire occurrence and weather have too closely followed those of 1947. It will be remembered that last year we had a late cold spring accompanied by excessive precipitation and remarkably few fires–all of which was followed by one of the worst fall fire seasons in recent times. The Division of Lands and Forests cannot ignore the similarity between the two years and is sitting on the edge of the anxious seat.

Concern is intensified by reports of drought conditions throughout the northern and eastern Adirondacks and until recently, in the southern Catskills. Things may change, but as we go to press the omens are not good. The brooks are low, the ground is dry, and precipitation has come mainly from passing thunder storms.

CAMPSITE BOOM–The Bureau of Camps and Trails reports that the 31 campsites maintained by the Department in the Adirondack and Catskill forest preserves are more than maintaining their popularity; witness the July 4 week-end with 89,285 man-days of use compared with 77,435 in 1947, or a 15 per cent increase.

These figures do not include the campers on the Lake George islands or on other undeveloped areas such as Lower Saranac and Forked Lake, nor does it include the vacationists who "did" the Fulton Chain canoe trip or the High Peak area trails. Unfortunately, it was necessary to turn away nearly 2,000 persons over the holiday week-end despite the opening of two new campsites at Rogers Rock and Lake Durant.

CONSERVATION AFLOAT – As part of the plan to replace worn and out-moded equipment, the Department's "navy" has received a shot in the arm in the form of four new inboard craft.

The Marine District has a new 32-foot boat, capable of "going out beyond" if necessary, to be used with other craft in supervising shellfish operations. At Lake George, a 26-foot all-steel boat is replacing the old wooden craft used in law enforcement and patrol activities. Two 28-footers, both wooden craft, are replacing the old boats used on Lake Ontario and the St. Lawrence River by the Game Protectors stationed in that area.

Winter Deer Mortality and This Fall's Hunting Prospects

DEER hunting prospects for the fall of 1948 throughout the southern part of the State in general should be better than last year; in much of the southern Catskills, there may be little change or even local decreases; in the Adirondacks, there seems little doubt that fewer deer will be found in those localities where winter losses were high, but on the other hand—because of the effect of lumbering and the snowfall pattern, there will also be many areas having a good abundance.

Winter mortality is a major factor limiting the abundance of deer in those sections of New York that have a severe winter climate. While some losses occur annually, seasons of above-average severity are experienced every few years. The winter of 1947-48, in its early stages, promised to be such a season (see THE CONSERVATIONIST, February-March '48). Observations in connection with the Pittman-Robertson research project have indicated the final outcome.

The past winter was peculiar in one important respect: the major storms which brought snow came from the southeast. Central and western New York had little snow and the western Adirondacks had less than usual in comparison to the southeastern portion. The southern Catskills, on the other hand, were blanketed with an exceptional fall of snow beginning with the Christmas storm. Conditions here, however, "broke" in mid-February.

Appreciable losses of deer were confined to the Catskills and Adirondacks. In the Catskills, while the early "break-up" removed the threat of starvation, dogs killed over 1,000 deer whose movements were hampered by the deep snow while it lasted. Accordingly, field work by project personnel during the past spring was confined to the Adirondacks.

In this region heavy losses were found in deer wintering areas in Hamilton and Herkimer counties. They were also found in the western third of Warren and the southeastern third of St. Lawrence counties. Substantial losses caused by dogs were found in some areas of Warren and Lewis counties and to a lesser extent in other Adirondack counties. In general, the situation was similar to that observed after the severe winters of 1939-40 and 1943-44. As in previous seasons of this kind, a substantial proportion of the winter-killed deer were adults.

On the brighter side of the picture, the effects of hardwood lumbering in the Adirondacks showed up during the past winter. Field work was done in many areas where mortality had been high during the winters of 1939-40 and 1943-44 but where extensive hardwood cuttings have been made during the past four years. In these areas losses were negligible or non-existent last winter, although the number of deer occupying them was similar to that of previous years. These observations are significant in view of the Department's program to improve food conditions by cutting hardwood saplings.

Of interest also were observations in areas where heavy annual harvesting of deer occurs. In these areas, in spite of deep snow and cold temperatures, no dead deer were found although the ground was intensively searched.

The findings of both this and previous years' work indicate quite definitely that winter losses, where predators are absent, are caused primarily by too heavy a deer population being concentrated on areas where winter food is inadequate. There appear to be two principal means of improving this situation: (1) adequate harvests of deer each fall so that the food supply on the winter range will be adequate to sustain the remaining population, and (2) annual efforts to encourage sprout growth and reproduction of hardwoods adjacent to deer wintering areas either by forest stand improvement cuttings or by logging mature hardwoods and softwoods. A program which incorporates both practices would have two primary effects: (1) build up the deer herd by increasing survival, and (2) improve the physical condition of the deer themselves.

Lack of quality winter food, when and where the deer need it, is the weak link in the chain of survival in such situations. Management must be applied to both the deer population and the environment if a more stable deer population is to be maintained.

—C. W. SEVERINGHAUS, *Game Research Investigator*

letters to the Editor

WRITE SOON

Your editors, in one respect at least, are just like other people: they like to get mail.

They also feel that since this is your magazine, it is only fair to provide you with space to say what you think of it —space to criticize, commend, or inquire. So write soon. The address is: Editor of the Conservationist, Conservation Department, Albany 7, New York.

LICENSE FOR ARCHERS

Dear Editor: What have the archers done to the Conservation Department that they should be penalized to the tune of $5.25 for the privilege of carrying a bow in the woods for two weeks? I have carried a bow quite a few days and have yet to get my first shot with it.

I have seen lots of deer in shotgun range but the bow will not shoot through brush. Why aren't we allowed to hunt with the regular deer license?

Merton Clemons, Elmira

Dear Sir: I have some questions pertaining to the coming archery season: 1. Will my special license permit me to take deer during the regular season in the event I don't get my deer during the archery season, if I continue to hunt with a bow? 2. If I get my deer with a bow is it legal to obtain a regular deer license and hunt with a rifle?

Paul J. Hermance, Elizaville

● *The archery license is good only for the 14-day special season. If you get a deer during that season, you're through for the year; if you don't, you can get a regular deer license and hunt with either bow or gun during the regular season. Regarding the price of the special license, most archers seem to think that it is fair in view of the fact that they're getting their own private, special season.—Editor*

PHEASANT RAISING

Dear Editor: I have a small home in the country (6 acres) on which I would like to raise some pheasants as a hobby. I would appreciate it if you would send me some information on this subject as to a license and the laws and limitations.

Harold C. Davis, Syracuse

● *This Department issues three kinds of licenses under which pheasants and certain other game birds may be possessed in captivity. The one you're probably interested in is for propagation, scientific and exhibition purposes, and costs a dollar a year. For further information write A. P. Miller, Superintendent of Inland Fisheries and Special Licenses, at this Department.—Editor*

DEER DAMAGE

Dear Editor: Permit me to make a few comments dealing with deer in the Shawangunk Mountain range, (middle of page 29 of the April-May issue).

I own 22 acres up there, 1 mile north of Tillson Lake on which I planted 500 red and 500 white pine which I got from the Conservation Dept. some years ago. Some of the red pines are so badly stunted from the deer eating them every winter that they are barely a foot high, while others are 8 to 9 feet high before this year's growth started. They make about 2 feet of growth a year now. I put strips of cloth on the branches of trees at planting time which no doubt saved the larger ones; also I put out a stack of hay mixed with a little salt one winter, but the deer did not touch it and ate the green branches of the pines instead. The trees are all the same age.

I wonder if there is some kind of spray I could use in the fall which would last thru the winter, or would it be better to forget about the smaller trees and plant tamarack (the kind that lose their needles in the fall) in their place. Can I get some of these from your Department next spring?

Walter Waltke, Jersey City, N. J.

● *It sounds as though your pine plantations had been made on a deer wintering ground. In down-state New York deer often congregate on areas with a southern exposure, where the sun keeps down the snow, and such concentrations usually lead to over-browsing. The result is that the more favored foods are rapidly consumed and the animals turn to less palatable items such as pine.*

When deer are really hungry, as they usually are in late winter and early spring, there is no practical way of preventing them from indiscriminate browsing. Larch, however, will not be bothered by deer. Our nurseries will have 2-year seedlings of European larch available next spring, and both European and Japanese larch the following spring.—Editor

STEAMBOATS

Dear Editor: "Out of the Past" (June-July) hit me smack between the eyes. How many recall the steamboats on the Fulton Chain runs. "Clear Water" & "Ne-Ha-Sa-Ne" big double deckers; "Iroquoisier" & "Old Forge", single deckers?

I was engineer in the "Old Forge" in 1923 to 1924. It was the mail boat. Two trips every day. Are these boats still running? I haven't been there since 1924, but still keep my Federal licenses and membership in M.E.B.A. up. The above named boats were operated under State license.

R. G. Summers, Buffalo

● *To the best of our knowledge none of the boats you mention is still in operation; they've all either been burned, turned into barges, or dragged up on land for show places or bath houses. Maybe some of our readers have better information.—Editor*

DANGER!

Dear Editor: I have a .22 caliber rifle, and wish to shoot small moving animals such as rabbits, crows, rats, etc. for sport. However, I do not know where it is permitted to discharge a gun. Please tell me where shooting is allowed, especially near New York City. If convenient, please quote State and local restrictions on this matter.

Incidentally, is a hunter's license required for this type of game?

George O'Brien, New York

● *You had better study the Conservation Law very carefully before going afield with that .22. Among other things the law says that "no person shall hunt, pursue or kill with a gun or long bow ANY wild animals or birds . . . without first having procured a license and then only during the times and periods when it shall be lawful". And in metropolitan areas you will have to take into consideration local ordinances pertaining to firearms. We repeat, you'd better study the law.—Editor*

BACKGROUND MATERIAL

Dear Editor: Just noted that you "like to get background material like this" (comment on Currier & Ives print, Fishing Through the Ice on Chateaugay Lake). In that case, let me add that the principal figure in the picture represents a man named Barbour, who was head of The Linen Thread Co. (and either he or his father, its founder). He was the father of Frederick K. Barbour, now himself head of the same company, brother of the late Senator (and amateur heavyweight boxing champion) Warren Barbour, and a very well known sportsman with rod, gun and rifle both in our own North Woods and in Eastern Canada.

Sparse Grey Hackle

Dear Editor: I am grateful to you because of the article by Sparse Grey Hackle because it so happens he was up here fishing over the Fourth of July. I fished with him for two days on Black River and Oriskany Creek. He is a grand guy and a damn good fisherman.

Seager B. Howard, Sherrill

HELP FROM A READER

Dear Editor: I have been following with much interest the series of articles on the lakes of the State, in the *Conservationist*. The recent one on Indian Lake, so near my own town and home, has prompted me to write to you, hoping that you may be considering a similar description and early history of Long Lake sometime in the future.

Should this be the case, I would like to offer my somewhat doubtful qualifications for research, or in any capacity you might think helpful. The fact that the Indian Lake article was written by a local person gave me the inspiration for this letter, and I hope you will not feel that I am imposing on you by the length of these paragraphs.

Virginia H. Farr, Long Lake

● *Thanks very much. Long Lake will be coming up in the October-November issue and we'll certainly get in touch with you. We appreciate offers of this kind and need the help.—Editor*

NEW ROADS, NEW DAMS

Dear Editor: A recent newspaper article noted that a road has been proposed connecting Sanford Lake and Lake Placid through Indian Pass. This measure should have many opponents as the sole benefactor seems to be the National Lead Company; however, there are other projects with equally selfish motives that would be actively opposed by sportsmen, if publicized.

We witness, in evidence, the proposed Higley and Panther Mt. reservoirs, ostensibly for flood control, and according to the Adirondack Moose River Committee, a plan for twenty-odd water power projects, some of which no doubt would

become flood control projects if they would flood forest preserve land.

I believe it is the duty of the Conservation Department and their organizations to call attention to such plans and oppose those that would not be for the public good, in actual truth.

Edward H. Miller, Scotia

● *A Constitutional amendment would be required before the road you mention could be built; the electorate would have to approve it. Considerable time is required to pass on an amendment; ample time to publicize the facts.—Editor*

PLUGGING, (TWO KINDS)

Dear Editor: You folks there are doing a grand job and I wish it could be made possible to add the cost of subscription to each hunting and/or fishing license issued so that more sportsmen could really understand the tremendous task you folks face in trying to preserve something from the more or less wanton destruction caused by ignorant sportsmen.

A movement to limit fishing to flys only would be a help. Today I saw on Oatka Creek, near Mumford, a chap smashing a yellow flat-fish plug into the stream and four other members of his family using plugs and pickerel spoons to scare all the trout for miles around—these with steel bait-casting rods. This is common practice on opening day on almost any stream in Western New York.

Robert W. Little, Jr. Rochester

● *We're very anxious to increase our circulation, but we don't want to force the sale of our magazine by tying it in with hunting and fishing licenses. That wouldn't be quite fair.—Editor*

FISH PLATES

Dear Editor: Is it possible to obtain a complete set of the colored pictures of fish which are printed on the back cover of every Conservationist. I would like something which could be carried and used for identification when out fishing. Of course I would be willing to pay for it and I'm sure many others would too.

Abe M. Weiner, Brooklyn

● *Our fish plates were originally used to illustrate the 16 Biological Survey Reports published by this Department. Although some of them have been reproduced elsewhere, no complete set has ever appeared in one volume. See note on page 28.—Editor*

MORE OF SAME

Dear Editor: I like your magazine real well, but not enough to subscribe twice in one year. *(There follows a plaintive but remarkably good-natured note about you know what.—Ed.)*

By the way I was interested in the articles on abandoned farms in New York State. Have since purchased badly run down place of five acres, mostly of second growth, a little of everything, on Irondequoit Bay. Would like to get some pine or spruce seedlings (not too much dough). Can you suggest anything?

Edward Crane, Sea Breeze

● *A good suggestion: get in touch with your District Forester, who is I. S. Bowlby, 34 Liberty Street, Bath. Among other things, he will tell you how you can get seedlings from the State nurseries.—Editor*

BLUE AND YELLOW PIKE

Dear Editor: I would like to know if the New York Conservation Dept. considers the blue and yellow pike the same species. I am in the fish business and I have been an impounding net fisherman for many years and I don't know of any state that has the same laws for blue and yellow pike. If I am not mistaken your own State doesn't have any size limit on blue pike, but there is a size limit on yellow pike. Seems like if they were the same species that law would be hard to enforce, wouldn't it?

Fred C. Ralph, North Girard, Pa.

● *Although some of our Aquatic Biologists consider blue and yellow pike as different kinds of fish and would favor calling them subspecies, this Department has found it impractical to distinguish between them as far as the law is concerned. Several years ago the law you mention was changed so that now there is no size limit applicable to blue and yellow pike in Lake Erie, Lake Ontario, the Niagara or lower Oswego rivers. P. S. Both blue and yellow pike, as well as the walleye, will appear on the back cover of our October-November issue.—Editor*

WIRE LINES, (CORRECTION)

Dear Editor: Let's keep men like Mr. Arthur D. Holmes (letter in June-July issue) out of our jails. He sounds like a good sportsman, of which we could always use a few more.

The use of metal lines is forbidden at Chautauqua Lake, the home of the Tiger Muskie. Special laws were put into effect four years ago and since that time the muskellunge population has come back into its own. This law has been one of the best conservation laws ever put on our books. Part of this special regulation also limits the catch to five muskies not less than thirty inches in length.

So, Mr. Holmes, some time late in September or early October (that's when they really bite) come up to Chautauqua, buy this special permit for 25 cents and tight lines to you.

Stanley P. Spisiak, Pres.
Allied Sportsmen of Western New York, Inc.

● *Thanks, Mr. Spisiak. Section 210, article 4 of the Conservation Law says: "Muskalonge shall not be taken in Cattaraugus and Chautauqua counties other than Lake Erie by the aid of a metal line or a line having metal leaders exceeding six feet in length".—Editor*

KAYADEROSSERAS

Dear Sirs: I have been talking to quite a lot of fellows around Saratoga and they say that Kadaross Creek in Saratoga County is to be closed. If so, I'd like to get the true facts about the closing and the dates and the length of time it will be closed. Most of the closing dates I've got are different.

James L. Guynup, Albany

● *The section of Kayaderosseras Creek from Route 9 east to Saratoga Lake is closed to all fishing during the close season for walleyed pike. The closure was ordered to protect the pike-perch on their spawning grounds, and it affects only the lower section of the creek in which very few trout are caught.—Editor*

THE LADY IS RIGHT

Dear Editor: Would you please settle an argument for us by telling us if salmon are caught before or after they spawn. I say that the salmon are caught when they go up the river before they spawn and that the meat is not good after they have spawned. Is that correct?

Helen Venosa, Jamaica, L. I.

● *It is.—Editor*

FOOD FOR PHEASANTS

Dear Editor: Do you have knowledge of a plant or shrub which could be planted to provide natural food for our pheasants. It seems they have to depend so largely upon what they can steal from our farmers.

I believe the distribution of the ringneck could be much more liberal, if he could find natural food more easily and more abundantly.

Arthur G. Sperl, Saugerties

● *No doubt about it, pheasant abundance is very closely related to the abundance of food. Our field technicians encourage the planting of frost grape, panicled dogwood, nightshade and ragweed. Ragweed in particular, cursed though it is by hay fever sufferers, is one of the most important wild foods for pheasants.—Editor*

BATS IN THE BELFRY

Dear Editor: We have bats in the organ loft of our church. I would like to know if there is any way of getting rid of them. I have heard that a stuffed owl will keep them away. Is that so or is there a better remedy?

Wesley E. Hart, Schenectady

● *We won't guarantee the results, but you might try either of these methods: (1) Light a sulphur candle in the organ loft, and after the smoke has driven out the bats seal up the openings by which they escaped, so they can't get back in. Place the candle in a pan of water, so that when it burns down it won't set fire to the floor. Or (2) just seal up the openings while the bats are out foraging at night.—Editor*

YES, BUT NO

Dear Sir: Is there a lake in New York State called Muskalonge Lake, and if so, is it noted for muskie fishing?

Edmund A. Stearns, Fulton

● *There is, in Jefferson County, but you'd stand a much better chance of catching a muskie in the St. Lawrence River. The lake covers 275 acres, is not posted, contains northern pike, pike-perch, largemouth bass, bullheads, sunfish, and blue gills, but no muskies.—Editor*

PEACE, IT'S WONDERFUL

Dear Sir: As sick as I get in riding those dam elevators I did it last week end when our family was down shopping at Montgomery Ward. I went to your building to get a license to fish. The elevator girl said you was living on the top floor so after a while I rode up but by cripes I walked back. After I got back to our farm and lit my pipe I read the book the lady gave me and dammed if it ain't made in 1947. I can't see if us landowners have to pay taxes and get this year's license why we must put up with laws on game over a year old. Next time I am down I will insist on a new book. I was down last Saturday but you was all locked up.

John D. Subee, Kirkwood

● *Steady, pal; the new book is out and we're open for business. We have to wait until the Legislature gets through making the laws before we can publish them in a syllabus.—Editor*

FEEDING STATION

Gentlemen: I am planning on using a feeder for wild birds this winter. I have planted sunflower and would like to know what else I could feed them. I have been told that gravel has to be supplied for digestion.

Guy E. Lawrence, Schenectady

● *We're no authority on this subject, but suet and fat, hung in trees around your feeding station, will make popular additions to the diet of sunflower seeds. Your customers will probably find their own gravel.—Editor*

PHOTO CREDITS

Pages 3, 11, 24, Doug Finch; 6, 25, Clayt Seagears; 12, R. M. Hick; 20, John Schemp; 26, Barnett Fowler; fourth cover, Ellen Edmonson.

NOTES ON FALCONRY

SPEAKING of falconry, the world-famous ornithologist-artist, Louis Agassiz Fuertes of Ithaca (1874-1927), expressed the hope 30 years ago that there would always be those with the means and desire "to keep alive one of the most beautiful and romantic sports that Man has ever devised." Today it's probable that there aren't more than 75 man-trained hawks in all America. Yet the venerable art of falconry still holds such high popular appeal that nearly all the big-circulation magazines lately have given much space to it.

Once upon a time at least 2,000 years ago, Man apparently used trained hawks as main meat getters. Later, gun powder replaced feather-power. But falconry still hung on, mainly as a social pastime. The ancient gear, jargon and techniques remain unchanged today. Also, the modern devotee is just as ardent a hobbyist as the Manchurian High Mucky-muck described by Marco Polo. This lucky fella, who probably carried an umbrella, used 1,000 trained falcons at a clip.

Two groups of hawks are used in falconry:

1. The true falcons. These have long, pointed wings and kill their prey by diving and socking with the fist. Falcons in New York include the duck hawk or peregrine, pigeon hawk and sparrow hawk. The latter is too light for hunting. The pigeon hawk is rather rare, and also on the small side.

2. The accipiters or short-winged hawks. We have three kinds—goshawk, Cooper's and sharp-shinned. All are bird killers, hedgerow or woodland hunters, seldom fly above the tree tops and kill by holding and trussing.

A third group, the broad-winged soarers such as the red-tailed and red-shouldered hawks, are too cumbersome for actual hunting.

Of all these, the rocketing peregrine is the universal favorite. The goshawk is a better meat getter, but is far less spectacular in operation than the diving duck hawk, one of the fastest of all birds.

In New York only the goshawk, Cooper's, sharp-shinned, marsh hawk and the pigeon hawk are not protected. Therefore, in order to possess any of the other hawks, they must legally be obtained elsewhere and a Department possession permit obtained. Furthermore, no hawk may be used in New York to take game even during the open season simply because the law legalizes only the gun and the longbow for this purpose. A bill introduced in the 1946 Legislature would have included hawks. It didn't pass.

Main arguments against the measure seemed to be: (1) That it was a cruel sport; (2) that too many game birds might be taken and (3) that the hawk, being non-selective of its prey, would take hen pheasants as well as cocks.

Arguments in favor were: (1) that falconry is not nearly so cruel as gun hunting since the target becomes almost immediately defunct and rarely escapes, wounded; (2) that falconers as a group seem more conscientious than any other; that there would be so few trained hawks ever available that any damage would be insignificant; that a captive hawk would take far less game birds than it would if wild; (3) that the trained hawk takes what it is flown at—cock or hen.

Trained hawks often show unusual affection for their owners who, for the most part, seem to care even more for the welfare of hawks in general than the most ardent protectionists. Some of the latter in one year have filled the Department's files with more letters concerning the safe-guarding of a single pair of roof-nesting duck hawks in New York City than were received on the Department's entire duck restoration program. Nor is this intended to be critical. Each to his own tastes, as Mother Goose so aptly put it.

SO much for hawking taboos. Here's what our State's Conservation Law *does* permit: Anybody may take from its nest and without permit in this State, any of the unprotected hawks mentioned previously. Trapping is illegal except under special permit. Next, provided the would-be hawker has plenty of interest, time and patience, he may overcome the shy bird's natural fear of Man and gain its confidence. Then he may train it to take a crack at a crow, starling, or any other free-flying unprotected bird. Or, he may elect merely to train it to strike an artificial lure.

Suppose the falconer obtains, legally, a peregrine or any other protected hawk outside the State and wants to possess it in New York? This may be done under a special Department permit. At this writing only six hawk-possession permits are outstanding in the State.

So much for the law. Now let's look into the business.

Nobody should get the idea that hawk taming and training is easy. It's far simpler to start with a youngster. But it rarely becomes as proficient as a wild-caught adult, self-trained to hunt. However, let's assume that a goshawk's nest has been located and a young male has been taken just before flying time. Being a male, he's called a *tiercel* and he won't grow as large as a female, as is normal with hawks. Because he was taken as a nestling he's known as an eyess. Had he been filched a few days later after having had one or two flying lessons on his own—he'd be a *brancher*. If taken during his first autumn migration, as would be most likely in New York, he'd be a *passager*. An old hawk caught wild is a *haggard*. Technically you'd be an *austringer*, not a *falconer*, because you're training an *accipiter*. Still follow?

WELL, you've got yourself a tiercel goshawk eyess. Potentially he's the toughest hell-for-leather lance-taloned feathered fury you could lay hands on. If left in the wild you'd be lucky to get within a mile of him. Meantime, he'd be knocking off grouse, pileated woodpeckers, herons or anything else he'd figure to tackle. Only rival on the aerial warpath would be His Dishonor, The Great Horned Owl.

On the head of this young pin-feathered devil you clap a rufter, (training hood). Permanently on his legs you put jesses, light tethering straps. For *hours* you take him on your fist, protected by a gauntlet, stroking him, talking, walking and getting him used to Man, hereditary enemy.

He is fed only from a "board" or from the gloved hand, the rufter being replaced before he's done, or he'll associate it (the falconers tell us) with the end of the meal and become hood shy. When he has learned to go to the board for food, he normally is given his freedom. He learns to handle his wings, do some hunting by himself. Invariably he returns to feed. When he begins to feel the wanderlust, he's caught up. His meals next are gradually transferred from the feeding board and fist to a lure, usually a bunch of weighted crows' wings attached to a long thong. Finally he does all his guzzling from this gadget.

Next training gag is a game. The general idea is to swing and jerk the lure so that your goshawk can't grab it to feed. After a while he can't be fooled. Also, since the lure is heavy, he learns not to carry it off. Then he's ready to hunt wild, dodging crows. He's hooded and carried afield on the fist, or on a cadge (box-like perch) until a crow is sighted. The hood is removed, the leg jesses freed and off he goes.

Sometimes he doesn't come back. In that case you become an ex-austringer.

—CLAYT SEAGEARS

HARNESSED HAWKS

Today's methods of taming and training hawks are unchanged after 2,000 years of practising this most complex outdoors art. Few persons now have the means or patience to succeed. Trained hawks are almost unbuyable. Also, no provision ever has been made in N.Y. law to permit their use - along with the longbow and gun - in the taking of game.

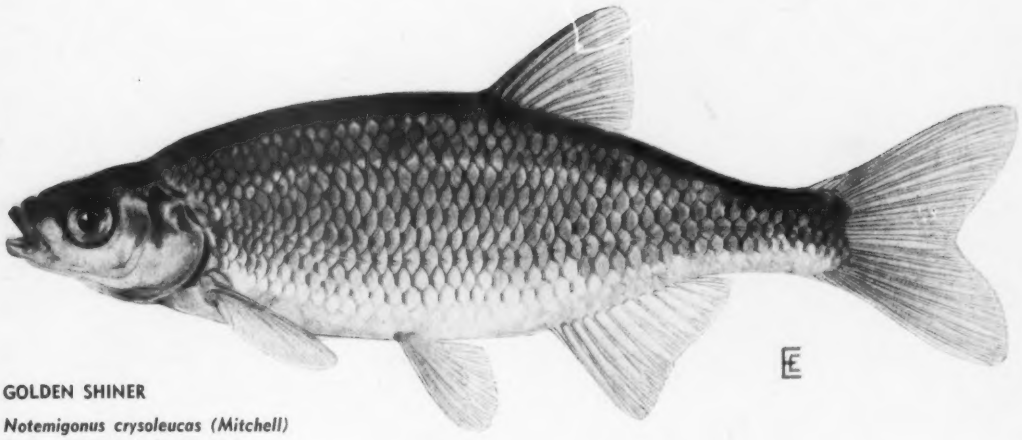
A true falcon (long pointed wings) is this sparrow hawk, smallest (robin size) and prettiest native hawk. On game farms it's a killer of pheasant chicks but normally eats mice, big insects, sometimes small birds. Falconers' "jesses" have been drawn on this young male.

Typical hawking gear---HOOD (1), worn in the field; JESSES (2), light leg straps; BELL (3), traditional finder; LEASH (4), for tethering; WEATHERING BLOCK (5), roost for outdoors basking. The model is a young red tail. All hawks shown, except the goshawk - top meat hunter of all - are protected in New York.

Added inconsequential note -- The arty-looking background smears across top were strictly accidental. The sparrow hawk model simply untied its tether and hopped to a tumbler half full of India ink wash. It upset. The hawks were retouched but the rest --- why *should* we interfere with modern art?

HORNED DACE

Semotilus atromaculatus (Mitchell)
Breeding colors from male 9¾ inches long



GOLDEN SHINER

Notemigonus crysoleucas (Mitchell)
From female 4 inches long

EMERALD MINNOW

Notropis atherinoides Rafinseque
From female 2 13/16 inches long